

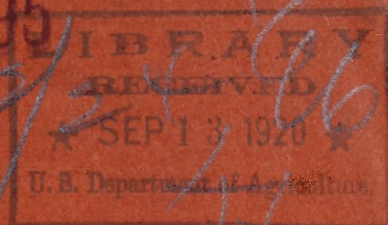
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ANNALS, MAY '95

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250 Acres Devoted to the Growing of Nursery Stock.

Newark Nurseries,

ESTABLISHED 1852.

C. W. Stuart & Co.,

NURSERYMEN,

NEWARK, - NEW YORK.

Newark, New York, has excellent shipping facilities, being on three of the largest railroads in the country:—The New York Central & Hudson River Ry., and West Shore Ry., for Eastern and Western points, and the Northern Central Ry., for Northern and Southern Points.



Introduction.

We are growing and offering a very complete assortment of Fruit and Ornamental stock, Small Fruits, Grapes, Roses and Shrubs, and our list of varieties includes such new varieties as we have either thoroughly tested ourselves, or which we personally know to have been thoroughly tested by competent authorities and found to possess merit, and also includes the best of the older and well known varieties.

We are extensive growers of Nursery Stock, having a large acreage devoted to our business.

REFERENCE : First National Bank, Newark, New York.

FRUIT DEPARTMENT.

SELECT APPLES.

The following varieties constitute our principal stock of apples, and our list embraces a careful selection of the best sorts for the several seasons, and few, if any, have been omitted that have proved themselves worthy of general cultivation. While this list may appear short, these varieties can be recommended as the *best* now in cultivation.

There is no farm crop which, on the average, will produce one-fourth as much income per acre as a good apple orchard. As it takes from six to eight years for an orchard to come into bearing, some people hesitate to plant, regarding the time and expense as in a great measure lost. In reply to this we would quote the remarks made by O. C. Chapin, of East Bloomfield, N. Y., (who has had experience of nearly half a century) to J. J. Thomas. He said that he considered the yearly growth of each apple tree, planted in his immense orchard of over one hundred and fifty acres, to be worth fully one dollar, *before they commence bearing*. With proper care it will prove the most profitable kind of an investment—one or two years' crops frequently paying for the whole orchard.

If apples are planted at the rate of fifty trees per acre, rows of peach trees may be planted between the apples. After eight or ten years of productiveness, as the space is needed for the apples, the peach trees may be removed, leaving the orchard better for the protection, and at the same time having yielded the planter a larger return for his outlay and labor.

The period of ripening, unless otherwise noted, is the date they mature in Western New York, and will be found to vary north and south.

For remedies for Diseases and Insects effecting this Fruit, see last pages in this book.

SUMMER VARIETIES.

Astrachan Red—Large, roundish; nearly covered with crimson and with an exquisite bloom on the surface of the fruit, like that of the plum; an apple of extraordinary beauty, and first rate quality, ripening very early, and suitable for the table and kitchen; tree a vigorous grower and a regular bearer; August.

Early Harvest—Medium size, roundish; pale yellow, with a mild, fine flavor; an American apple, and justly very popular on account of its beauty and excellent qualities for the table, as well as for cooking; very productive, and is long in season. July and August.

Early Strawberry—Medium size; mostly covered with deep red; tender, almost melting, with a mild flavor. Tree a *moderate*, erect grower, and a good bearer; a beautiful and excellent variety for both orchard and garden. Middle to end of August.

Sops of Wine—Medium size; yellow and red, often splashed and shaded with deep red; flesh white, mild and sub-acid, and sometimes stained with red; an abundant bearer. August to September.

Sweet Bough—Large size; pale greenish yellow; flesh tender and sweet; is desirable as an eating apple. Ripens in August.

Tetofsky—Medium size, nearly round; flesh white, very juicy and acid, with a pleasant aromatic flavor. Fully as hardy as the Duchess of Oldenburgh, and producing regularly, abundant crops of beautiful fruit. Succeeds over a large extent of country, and is especially desirable in high latitudes, where many other fine varieties fail, by reason of the extreme cold.

Yellow Transparent—A new Russian variety, imported in 1870 by the Department of Agriculture at Washington. Tree hardy and a strong grower, and an *unusually early bearer*. Fruit good size and good quality; skin clear white at first, turning to a beautiful pale yellow when fully ripe. Parties who have fruited it extensively, both north and south, say that it ripens earlier than any other variety, being ten days to two weeks ahead of Early Harvest, making it *exceedingly valuable* as an EARLY market variety.

AUTUMN VARIETIES.

Alexander—Large size; deep red or crimson; flesh yellowish white, crisp, tender, with pleasant flavor. This is a very handsome Russian apple, and like all others coming from that country, valuable on account of its hardiness, being suited to the extreme north. In season from October to December.

Autumn Strawberry—Medium size, roundish, or inclining to an oval shape; flesh whitish, striped and splashed with red; tender and juicy, and of a very pleasant and agreeable flavor; bears young and abundantly, and is annually loaded with crops of fine fruit.

Chenango Strawberry—(For description see Sherwood's Favorite.)

Colvert (POUND PIPPIN)—A very large and handsome apple; tree a straight and vigorous grower and good bearer. A fine market apple, ripening in October.

Duchess of Oldenburgh—Large size, roundish; streaked with red and yellow; flesh whitish, juicy and sub-acid, ripening early in the fall; tree a vigorous grower, having fine, large foliage; bearing abundantly and when very young; succeeds in nearly all sections of the country, and is as valuable in the extreme north as it is in the south. It is of Russian origin and is fully as hardy as any known variety. August and September.

Excelsior—This is another most valuable seedling of Mr. Gideon's, raised in Minnesota. It was raised from the seed of the Wealthy, which is already known as one of the handsomest, hardiest and best flavored of our newer fruits, and it partakes of many of the best characteristics of the parent variety. Ripens in early fall, a little later than the Duchess of Oldenburg; about the size of Fameuse and very handsomely colored; is a shade or two lighter than the Wealthy, while it closely resembles it in quality and in the form and growth of the tree. October.

Fall Pippin—Large size; roundish oblong; flesh yellow, tender, rich and delicious; tree a good grower and a regular, abundant bearer. This is a fine fruit and is justly considered the first of autumn apples in all the Middle states, and succeeds equally as well north as south. November and December.

Fameuse—Medium size; deep crimson; roundish, somewhat flattened; flesh very white, tender, crisp and juicy, with a slight perfume. Tree a good grower, hardy, and a regular bearer of handsome fruit. *Valuable in Canada and the Northern States.* October to January.

Gladstone—(NEW HARDY.) A very handsome apple resembling the Duchess of Oldenburg; fruit is larger and of better quality and the tree a stronger grower; very hardy and especially adapted to northern sections, where hardy varieties are required. Fruit large, skin smooth, washed and streaked with red, on a yellow ground; flesh juicy, sprightly sub-acid. Good. September.

Gravenstein—Very large; round; greenish yellow; flesh tender, juicy and crisp, with a slightly aromatic flavor, and of the first quality; tree very vigorous and productive, bearing regular crops of finely shaped, handsome fruit. Ripens through September and October.

Haas (LUDWIG)—Large size; somewhat roundish, conical; light color, splashed and mottled with light red, with many dots and dark centers; flesh white, but often a little stained next the skin. In season from November to March.

Maiden's Blush—Medium size; flat; pale yellow, highly colored on side exposed to the sun; flesh tender, sprightly and sub-acid. This variety makes a fine rapid growing tree, bearing large crops of handsome fruit, and is very profitable as a market sort.

Munson's Sweet—Medium to large; pale yellow with a red cheek; tender, juicy and good. Tree a *vigorous* grower and good bearer. October and November.

Pound Sweet—A very large, round, greenish apple, excellent for baking. Tree a free grower and productive. October to December.

Pound Pippin—(For description see COLVERT.)

Rambo—Medium size; round and flat; yellowish white in the shade, streaked and splashed with pale yellow and yellow in the sun; flesh greenish white, very tender, rich, mild sub-acid, of very good quality, but only best in sections of Southern Pennsylvania and Delaware.

Red Bietigheimer—A rare and valuable German variety. Fruit large to very large; roundish, inclining to conical; skin pale, cream colored back-ground, mostly covered with crimson; flesh white, firm, sub-acid, with a brisk, pleasant flavor. Tree a *free* grower and abundant bearer. Early fall. September.

Rolfe—This apple originated in Guilford Center, Maine, and is now grown there quite extensively, and is regarded as *perfectly hardy*; a good bearer and of fine quality. They class it as one of the best selling and most attractive market apples they have. Tree a strong grower and *annual bearer*; fruit large size and handsome; color red on yellow ground; flesh light, sub-acid, and core very small; excellent for cooking, or for the table. Ripens in September and October.

Sherwood's Favorite (CHENANGO STRAWBERRY)—Medium size; oblong and indistinctly ribbed; a light color splashed with dark crimson; flesh white, juicy, very mild and tender, slightly sub-acid. Very much esteemed for the table.

Stump—This new fall apple is attracting deserved attention. It is of good size, pale yellow, striped and splashed with red; exceedingly fair and beautiful, and of excellent quality. Tree a vigorous grower and *abundant* bearer. The fruit, from its uniform size and perfection, handsome appearance, and mild, sprightly, sub-acid flavor, is most attractive and valuable for home use, and commands ready sale in the market at the highest prices. August and September.

Twenty Ounce—Very large; slightly uneven; greenish yellow splashed and marbled with stripes of purplish red; flesh coarse grained, sprightly, brisk sub-acid. October and November.

Wealthy—Medium size; color whitish yellow, shaded red; flesh white, stained with red; tender, juicy and sub-acid. A beautiful and excellent fruit, originated in Minnesota. Tree extremely hardy; a good grower and *abundant* bearer. This apple is obtaining a high reputation throughout the country. November to January.

WINTER VARIETIES.

America—A popular variety through Virginia and the south; fair size; quality excellent; color a beautiful deep red; a very handsome apple. The originator says it keeps perfectly with him until February or March. Fruit very uniform and perfect; an annual bearer.

Baily Sweet—Large, deep red, tender rich and sweet; tree vigorous, upright grower and a good bearer. November to April.

Baldwin—Large size; bright red; flesh yellowish white, with a crisp and agreeable flavor. Tree very vigorous and productive; very popular in most of the Northern States, and more extensively grown than any other variety.

Baxter—Originated in Canada, on the banks of the St. Lawrence. Above medium size; dark red, spotted; mild sub acid, quality good. November to March.

Belle de Boskoop—Mr. Downing says: "A new variety, said to be of Russian origin. Tree vigorous, spreading, comes into bearing moderately early, and produces abundantly alternate years. Fruit medium to large, oblate to roundish oblate; skin yellow shaded with light and dark red over nearly the whole surface, some specimens more or less mixed with russet; flesh a little coarse, crisp, tender, juicy, brisk sub-acid, rich and of very good quality; core small and close. Season February to April."

Bellflower (YELLOW)—Large size; yellow, with a tinge of red on the sunny side; flesh tender, juicy, crisp, with a sprightly sub-acid flavor, and when not fully ripe, quite acid. This is an excellent Winter apple and is highly esteemed as a market fruit. The tree is hardy and a vigorous grower, succeeding well on light, sandy soils.

Ben Davis (NEW YORK PIPPIN)—Large size; roundish, sometimes conical; yellow, and often entirely overspread or splashed with red; flesh white, tender, juicy and sub-acid. This is a very popular apple in parts of the west and southwest, and is much planted for market, as it commands a high price, and is profitable from its early bearing qualities. Keeps till mid-winter or later.

Bottle Greening—Resembles Rhode Island Greening, but tree a better grower and much hardier. A native of Vermont. December to March.

Canada Red (OR STEEL'S RED)—Medium size; red with white dots; flesh rich, sub-acid. Tree a moderate, slender grower. November to May.

English Russet—A valuable, long keeping variety. Not fit for use until February, and may be kept till July. Very productive; good flavor. Valuable market fruit.

Fallawater (FORNWALDER; TUPOCKEN.)—Very large; globular; yellowish green, dull red cheek; juicy, crisp, pleasant, sub-acid flavor. Tree a strong grower, very productive even while young. November to March.

Gideon—This fine variety originated in Minnesota, the same region that has lately given us several of the most beautiful and valuable of our extra hardy apples. It was raised from seed of a seedling Crab by that veteran fruit grower, Peter M. Gideon, of Excelsior, Minnesota, and to use his language, "is as hardy as a native oak." The fruit is of a rich golden yellow, with a very clear skin and a handsome rosy blush; resembles Yellow Bell-flower, though it will average a little smaller; juicy and fine, with an excellent sub-acid flavor. Ranks well as an eating apple, and its handsome, showy appearance, makes it a most tempting fruit. While its crab origin seems to be thoroughly developed in the hardy, rugged character of the tree, there is no trace of this in the fruit, which is in every respect a *fine eating apple*. October to December.

Golden Russet (AMERICAN)—Medium size, of a beautiful, clear, golden russet; very tender, juicy and rich; a thrifty, upright grower and excellent bearer. A most hardy and valuable variety. November to April.

Grimes' Golden—Medium size; round or slightly conical; rich golden yellow, sprinkled with light gray dots, sometimes slightly russeted; flesh yellow, crisp, tender, rich and juicy, with a sprightly sub acid flavor. Tree hardy, vigorous and productive. It succeeds over a large extent of country, and endures severe cold without injury. December to February.

Hubbardston Nonsuch—Large size; striped yellow and red; flesh yellow, juicy and tender, with an agreeable flavor; of the finest quality and very valuable. It is a native of Massachusetts and bears regularly crops of fine fruit. November to January.

Jacob's Sweet—This is a large, handsome, showy apple, almost round; skin greenish yellow, with a beautiful blush on the sunny side. Originated near Boston, and is regarded as very valuable; of excellent quality; a good keeper; a strong grower and large bearer. Season, December and January.

King (KING OF TOMPKINS CO.)—Large size; red, making a handsome appearance; flesh inclining to yellow and rather coarse; juicy, tender. It bears an abundant crop annually, and commands first-class price in market. November to March.

Lankford's Seedling—Originated in Kent county, Maryland. Fruit medium to large size; color yellow, striped, and nearly covered with bright red; flesh firm, juicy, mild sub-acid. One of the best of the late keepers. January to March.

Longfield—One of the imported Russian varieties; a free, upright grower; early and abundant bearer; fruit medium to large; yellowish green, thickly covered with red stripes, a decided blush on the sunny side; rich, sprightly, sub-acid. December to March.

Magog Red Streak—A variety of extreme hardness, which originated in Vermont. Tree very thrifty and vigorous and of great productiveness; is a very long keeper; fruit medium; roundish; skin light yellow, shaded, and faintly striped and splashed with light red over half the fruit; flesh yellowish, moderately juicy, mild sub-acid. December to March.

Mann—Medium to large; deep yellow when ripe, with brownish red where exposed; tender and juicy, with mild, pleasant, sub-acid flavor; tree hardy; a good grower and an *early and regular bearer*; keeps well. Originated in Northern New York, and popular in the colder localities. January to April.

McIntosh Red—An exceedingly valuably, hardy, Canada sort; medium size; nearly covered with dark red; flesh white, fine, very tender juicy and refreshing, with a peculiar quince-like flavor; a good annual bearer of fair, handsome fruit; resembles the Fameuse, but larger and more hardy, and fully equal in quality to this standard sort. November to February.

Milding—Originated in New Hampshire. Tree hardy, of strong, vigorous, upright growth; very productive alternate years; fruit large, skin whitish yellow, shaded, striped, splashed and mottled with light and dark bright rich red nearly over the whole surface; flesh whitish, rather coarse, tender, juicy. December to January.

Newtown Pippin—One of the very best apples as to quality; tree a light grower while young; very juicy, crisp, and highly delicious flavor; fine keeper; does not succeed in all sections. December to May.

Nickajack—A large, roundish, striped apple of fair quality; very hardy and productive; popular in the south. December to April.

Northern Spy—Large size; roundish, somewhat conical in shape; striped and covered with crimson on the sunny side, overspread with a thin bloom; flesh juicy, rich and highly aromatic; ripening in January, and keeping in good order until the following June.

Northwestern Greening—This new Wisconsin seedling apple, which received the first prize of the WISCONSIN STATE HORTICULTURAL SOCIETY at its meeting in '83, over a large competition as a seedling apple, has been thoroughly tested in most trying places in Wisconsin, and proves to be equal to the Wealthy in every respect as a tree, and has the added merit of being a *late keeper*; fruit medium to large; round ovate to conical; smooth; greenish yellow; flesh fine grained, firm, juicy, sub-acid, good. Valuable for the north. Season, January to spring.

Paradise Winter Sweet—Fruit rather large; regularly formed, roundish oblate; color, dull green when picked, with a brownish blush, becoming a little paler at maturity; flesh white, fine grained, juicy, sweet, sprightly, and very good. November to April.

Pewaukee—Medium size; round; bright yellow, splashed and striped with dull red, covered with a gray bloom and overspread with whitish dots; flesh yellowish white, juicy, sub-acid, with a rich aromatic flavor; in quality something like Jonathan; tree a strong grower, and very hardy; adapted to the extreme north, and equally as valuable for southern culture. It is a seedling from the Duchess of Oldenburg. December to March.

Perry Russet—Pale yellow, mottled with russet on the sunny side; flesh yellow, firm, juicy, brisk, sub-acid; tree a moderate spreading upright grower, hardy, and early and abundant bearer. November to December.

Quebec Winter Sweet—Originated in the Province of Quebec, Canada: about the size of the Talman Sweet: color yellow, with red cheeks; splendid quality and very hardy; it keeps until March.

Rawle's Genet (RAWLE'S JENET, NEVER FAIL, &C.)—Medium to large size; yellow striped with red; crisp, juicy, rich; a *free* grower; prolific bearer. One of the most popular winter apples in the south and southwest. January to May.

Rome Beauty—Large; color yellow, shaded with bright red: flesh yellowish, tender, juicy, sub-acid. November to February.

Rhode Island Greening—Large size; roundish, often a little flattened: dark green, becoming greenish yellow when fully ripe; flesh yellow, fine grained, tender, crisp and very juicy, of a slightly aromatic flavor: of the very best quality and highly esteemed wherever grown; succeeding well in all northern sections and on a great variety of soils. A crooked growing tree in the nursery. November to March.

Russet, Roxbury (OR BOSTON)—Medium to large size; roundish, sometimes a little flat; dull green, covered with brownish yellow; flesh greenish white, moderately juicy, with a rich sub-acid flavor; very popular in New England and New York. January to June.

Salome—Tree very hardy, healthy, vigorous and productive; an early and annual bearer; fruit medium, roundish conical; skin yellow striped and splashed with red, and sprinkled with small yellow dots; flesh whitish yellow, tender, juicy, mild sub-acid, slightly aromatic; very good. Originated in Illinois, where it keeps easily until June.

Scott's Winter—A valuable variety which originated in Vermont, and is like the Magog Red Streak, hardy in the severest climate: tree a thrifty grower; an early and profuse bearer; fruit medium, roundish; surface deep red and light red in blotches and streaks; flesh yellowish white, slightly reddened near the skin: rather acid and good in quality. Pronounced by Dr. Hoskins, of Newport, Vt., as his *most profitable market apple*. Keeps till June.

Steel's Red (See Canada Red).

Stark—Tree a free, vigorous grower: fruit large; roundish: skin greenish yellow, shaded, and striped with light and dark red nearly over the entire surface, and thickly sprinkled with light brown dots; flesh yellowish, moderately juicy, mild, sub-acid. January to May.

Seek No Further—Medium to large size: striped with dull red and russet; flesh white, fine grained, tender, with a rich pearmain flavor: quality very good. It succeeds well in the Eastern States, where it is in season from October to February.

Smith's Cider—A widely grown and popular market apple; vigorous grower and productive; fruit medium to large; yellow, shaded and striped with red; tender, rich and juicy, pleasant, mild sub-acid. December to March.

Spitzenburg Esopus—Medium size; deep red, covered with gray dots; flesh yellow, rather firm, crisp and juicy, with a delicious flavor. The tree is a poor grower in the nursery, and consequently less grown than others, but the quality of the fruit makes it a general favorite. December to March.

Sutton Beauty—Origin, Worcester, Mass. Fruit large; roundish; skin waxen yellow, striped with crimson; flesh tender, sub-acid; good tree; a free grower and productive; a valuable new apple. December to January.

Talman's Sweeting—Medium size; pale whitish yellow, with a soft blush on one side, and generally a line running from stem to calyx; flesh quite white, rather firm, fine grained, with a rich, sweet flavor; a very popular and profitable orchard sort, from the hardihood of the tree and its great productiveness. In season from November to March.

Wagener—Medium size; roundish, oblate; yellow, mostly shaded with crimson, striped, and sprinkled with light dots; flesh inclining to yellow, very tender, juicy, with brisk vinous flavor. It is largely planted on account of its early bearing qualities, but is liable to over-bear; fruit is improved by thinning. December to March.

Walbridge—Medium size, handsome; striped with red; quality good; in season from March until June; tree a vigorous grower and productive; hardy and desirable for planting in northern sections, having stood uninjured in Minnesota, where all but the most hardy varieties have failed. Ripens through late winter.

White Pippin—Resembles the Newtown Pippin; much grown and highly esteemed in some parts of Ohio and other Western States; tree a vigorous grower and bearer. January to March.

Wine Sap—Large size; roundish oblong; of a deep red color, with a few streaks and a little yellow ground appearing on the shady side; flesh yellow, firm, crisp, with a rich high flavor; quality very good. December to April.

Willow Twig—Large, roundish; greenish yellow, striped with dull red; flesh firm, rather tough; early bearer. April to May.

Wolf River—One of our hardy varieties, that may be classed, without doubt, as an "iron-clad." It originated near Wolf River, Wisconsin, and is a strong grower and a great bearer, and perfectly hardy. Fruit large size; greenish yellow, shaded with crimson; flesh white, tender and juicy, with a peculiar, pleasant and acid flavor. In season January to February.

York Imperial—Medium, oblate; white, shaded with crimson; flesh firm, crisp, juicy and sub-acid; a good bearer and keeper. December to February.

HARDY APPLES.

“Iron-Clad” Apples—The opinion has long prevailed in some sections that the attempt to produce valuable apples in Northern New York and New England, and the adjoining portions of Canada, and in Wisconsin and other cold sections, must result in failure. While this is correct as to certain varieties, its general application is entirely erroneous.

In our Price List, we present a list specially selected for the extreme hardness of the tree and the excellence of the fruit, on which our friends and patrons who desire to grow apples successfully in the sections named, may confidently rely to produce fruit of fine quality, with regularity and abundance. They have been termed “Iron-Clads” by some orchardists, and are well deserving a term that expresses so fully their power to endure a severe climate.

WINTER APPLES FOR THE SOUTH.

It is of great importance, particularly with southern planters, to give careful attention to the selection of the varieties of winter apples that they plant, as great disappointment has resulted by reason of planting varieties that originated in the north and which, in the warmer southern climate and longer seasons, proved to be fall apples, and this results in an impression in the mind of the public that the cause of these sorts ripening in the fall was that the trees were grown in northern nurseries.

The particular spot where the tree may happen to have been propagated has nothing to do with its seasons of ripening, but *the place of origin* has everything to do with it. For example, take a tree of the King apple from a nursery in Georgia, and another from a nursery in New England, plant the trees side by side in Delaware, and both will produce apples ripening in October. Plant the same trees in Western New York, and the product will be a good winter apple. Hence the importance and necessity of southern planters selecting for their winter apples, *varieties of southern origin*. The south has already produced a few valuable winter apples, and is no longer dependent on the varieties that have so signally failed there. In our Price List, we give a list of varieties that have proved themselves late keepers in the South.

SELECT CRAB APPLES.

Within the past few years much attention has been given to improving this class of fruit, with a view to extending its cultivation among fruit growers, more especially in cold sections, or in the extreme north. The varieties described below being entirely hardy, become of great value in such localities, and while they will endure the greatest degree of cold, they thrive equally well in the Middle and Southern states. All are valuable for cider, preserves and cooking, and some of the improved varieties are pleasant and rich for the dessert. The entire hardihood of the trees, and their productiveness, makes them of great value in sections where many varieties of apples fail.

One familiar with only the Siberian Crabs can have but a faint conception of the size, beauty and excellence of the new and improved varieties which have been introduced during the past few years. Every one having even a small place should set out at least a few Crab trees for preserves and jelly. Some varieties make very desirable table sauce.

This fruit is profitably grown for the market.

General Grant—Large size; round; yellow, covered with stripes of red, and when exposed to the sun turning quite dark; flesh white, fine grained, mild sub-acid. Tree a good grower, hardy and productive. In season during late autumn.

Hyslop—Fruit large, produced in clusters; roundish, ovate; dark, rich red, covered with thick blue bloom; flesh inclining to yellow, sub acid; good for cider and for culinary purposes; very popular on account of its large size, beauty and hardness.

Martha—A new crab raised from the seed of the Duchess of Oldenburg, by P. M. Gideon, of Minnesota. Mr. Gideon says: "A rapid, stiff grower, a perfect pyramid in tree; a great bearer of the most beautiful fruit we ever grew; a bright glossy yellow shaded with light, bright red; a mild, clear tart, surpassing all other crabs we ever grew for all culinary purposes, and fair to eat from hand. Season October and November." We regard it as very valuable.

Minnesota—Fruit of the largest size; light color with blush on the sunny side; flesh crisp, juicy, fine. In size, beauty and quality, one of the best of the winter crabs. November to January.

Transcendent—Medium to large size; roundish oblong; golden yellow, with a rich crimson red cheek, covered with a delicate white bloom; at ripening, the red nearly covers the whole surface; flesh yellow, crisp, and when fully ripe, pleasant and agreeable; in season early in autumn. Tree perfectly hardy; a young and abundant bearer.

Whitney No. 20—Of large size; skin smooth, glossy green, striped and splashed with carmine; flesh firm and juicy, and flavor very pleasant; ripens latter part of August. A great bearer and very hardy, as well as a vigorous, handsome grower.

SELECT PEARS.

The cultivation of this fruit is rapidly extending as its value is appreciated. The range of varieties is such, that like apples, they may be had in good eating condition from August until early spring.

The melting, juicy, tender, refined flavor and delicate aroma of the pear, gives it a high rank among fruits. It will adapt itself to as great a variety of soils as any fruit tree, though it thrives best on moderately deep, strong loam, and should have a *dry*, well-drained sub-soil. The soil should have every autumn a moderate top-dressing of manure to keep the trees in good condition; this promotes steady and regular growth, and it is better than occasional heavy manuring.

Gathering Pears—One peculiarity of the pear should always be kept in mind, that nearly all varieties should be picked from the tree before maturity, and ripened in the house. Many sorts which are very dry and only second or third rate if ripened on the tree, become in this way very juicy, and acquire the highest and richest flavor. Summer pears should be picked at least a week or ten days before they are ripe. Autumn sorts two weeks before their time. Winter varieties should be picked before there is any danger of frost. As a general rule gather when, on gently lifting the fruit, the stem will separate readily from the limb. Place in a dark, dry room till fully matured.

When the trees bear abundantly it is best to thin the fruit well when it is about one-third grown. By this means the remaining specimens will be greatly improved and the trees saved from injury.

Our list of pears has been selected with care and reduced to a small number, all of which are of special excellence.

Pears grown as Standards are worked upon Seedling pear stock, (or roots) and when grown as Dwarf Pear are worked upon French quince stock.

UNDER A SEPARATE HEAD WILL BE FOUND A LIST OF SUCH VARIETIES AS THRIVE BEST AS DWARFS.

For remedies for Diseases and Insects effecting this Fruit, see last pages in this book.

SELECT STANDARD PEARS.

SUMMER VARIETIES.

Bartlett—Large size; irregular in form; clear yellow, with a blush on the sunny side; very juicy, buttery and highly flavored. Tree a strong grower, bears abundantly and when quite young. In season during August and September. One of the best of summer varieties, and succeeds over a large extent of territory.

Clapp's Favorite—Large size; pale lemon yellow; flesh fine grained, juicy, melting, rich and buttery; earlier than Bartlett, and resembling the Flemish Beauty in growth, having fruit of a uniform size evenly distributed over the tree. It is equally hardy with Flemish Beauty; a good grower and productive. In season during August.

Doyenne d'Ete—Small size; yellow, with a blush on the sunny side; melting and sweet, with pleasant flavor. Tree a strong grower and very productive. In season during August.

Flemish Beauty—Large size; greenish yellow and brown, with large spots of russet; rich and juicy, melting and with a slightly musky flavor; an old and highly esteemed variety; a strong grower and great bearer; hardy and desirable. This variety ranks for hardiness among pears as the Duchess of Oldenburg does among apples—with the most hardy. In season during September and October.

Lawson—A vigorous, upright grower; an early bearer and productive. Large size; roundish, obtuse, pyriform; bright yellow, nearly covered with vermillion. Quality fair to good. A good shipper and a profitable market fruit. Ripens with Doyenne d'Ete. August.

Manning's Elizabeth—Small to medium; bears in clusters; crimson and gold color, very beautiful; melting, rich, sugary, sprightly, perfumed flavor; very productive. One of the best of early pears.

Osband's Summer—Fruit medium size; inclining to round; juicy and melting, with a rich, sugary flavor, and often slightly perfumed. Tree moderately vigorous, an erect grower and very productive. In season during August.

Petite Marguerite—Medium size; skin greenish yellow with brownish red cheek, and covered with greenish dots; flesh fine, melting, juicy, vinous and of first quality. Tree an upright grower and an early and abundant bearer.

Souvenir du Congress—A fine variety of very large size and most showy appearance; skin smooth, bright yellow, flushed with brilliant red or carmine; flesh firm, less musky than Bartlett, very juicy, and firm to the core; should only be grown as a Standard. The tree is an upright, pyramidal grower, vigorous and very productive. The fruit grows sometimes singly, but generally in clusters of two or three, and hangs firmly to the tree. August and September.

Tyson—Above medium size; deep yellow at full maturity, slightly russet, with a crimson cheek; melting, juicy and fine flavored; a vigorous and rapid grower. In season during August.

AUTUMN VARIETIES.

Belle Lucrative—Large size; yellowish green; melting and delicious; an upright grower and productive; bears while young. In season during September and October.

Beurre Bosc—A large and beautiful russety pear, with a long neck; melting, or nearly so, highly flavored and delicious. A *moderate* grower and rather irregular; bears well. We usually top graft in order to obtain good Standard trees. It does not succeed on the quince, or as a Dwarf tree. September and October.

Beurre Clairgeau—The flesh is inclined to be a trifle coarse and granular on strong, moist soil, but in a rich, warm spot it is far superior. The tree is a strong, shapely grower—makes a beautiful pyramid. It should only be grown as a Standard and not as a Dwarf. Very large; light yellow, shaded with crimson and russet; an early and abundant bearer. From its handsome appearance and productiveness, it is one of our best market varieties, and is extensively planted for that purpose.

Beurre d'Anjou—Large size; pyriform; light green, with russet and red cheek; rich, melting, and of excellent flavor; fine grower and good keeper; of excellent quality; bears well; an excellent market sort. In season during late fall and early winter.

Duchess d'Angouleme—should only be sold as a Dwarf. Very large size; with a rough and uneven surface; a greenish yellow, with patches of russet and a dull red cheek; a vigorous and strong grower and good bearer while quite young. It attains its greatest perfection on the quince root, or as a Dwarf tree. In season during October and November.

Eastern Belle—Originated in Maine; probably a seedling of the Belle Lucrative; fruit medium size; yellow, shaded with light red and some russet; juicy, half melting, sweet and rich, with peculiar musky perfume; of excellent quality, very hardy and an abundant and regular bearer. September.

Frederick Clapp—A very fine new pear raised by Lemuel Clapp, of Dorchester, Mass., from seed of the Urbaniste crossed with Beurre Superfine. Tree a vigorous grower. Fruit medium to large; roundish; skin smooth, bright yellow; flesh whitish yellow, very juicy, melting, highly vinous and slightly aromatic. Ripens from middle to last of October.

Goodale—This hardy pear originated at Saco, Maine. Fruit large; flesh white and of excellent flavor and quality. Tree hardy, vigorous, and upright in growth; uniformly productive. October.

Hoosic—This new variety originated in Williamstown, Mass. Fruit large size; skin greenish yellow, dotted and marbled with russet; flesh fine grained, melting and juicy, with a rich almond flavor. In quality it ranks among the best; it is an erect, fine grower; very hardy; a great bearer. Season October.

Howell—Large size; light waxen yellow; sweet and melting, of excellent quality; a strong and hardy grower and good bearer. Extensively planted all over the country. In season during September and October.

Idaho—Is a seedling raised from seed of a large red cheeked pear by Mrs. Mulkey, of Idaho, who planted the seed about twenty years ago. The tree fruited the fourth year from seed, and has borne annually ever since, seemingly to be entirely hardy. As it originated in or near the latitude of Quebec, it has survived winters when the thermometer ranged from 15 to 30 degrees below zero. The trees are upright and vigorous in habit, having a dark, luxuriant foliage, giving the impression that it may be a decendant of the Oriental race of pears, though of much superior quality to any of their known varieties. Very productive of fruit of largest size, weighing from 16 to 23 ounces; form roundish or obovate; flavor pleasant—equal to Bartlett; flesh entirely free from gritty texture; core exceedingly small and often without seeds; later than Bartlett, and good shipper, having carried 2,000 miles in good condition.

What Others Say About It.

Its quality is remarkable for such a large fruit.

P. J. BERKMANS, President American Pomological Society.

The most noteworthy new fruit which has come to the notice of your committee. It is very large, handsome, and of delicious flavor.

F. M. HEXAMER.

Chairman Committee Native Fruits, American Pomological Society.

Exquisite, of first quality and much to be recommended.

E. VAVENNE, Director of Public Gardens, City of Rouen, France.

Keiffer's Hybrid—This unique pear was raised from seed of the Chinese Sand pear, supposed to have been cross fertilized with some other kind grown near it. Tree remarkably vigorous, having large, dark green, glossy leaves, and is an early and prolific bearer. *The tree is inclined to over-bear, and proper thinning will improve the quality of the fruit.* Fruit large to very large; roundish oval narrowing at both ends; skin deep yellow, with a fine blush on the sunny side; flesh whitish, a little coarse, juicy; very good. Ripens through October and November. To have it in perfection, it should be gathered when fully grown and ripened in the house. As a canning pear it retains its light color and possesses a rich vinous flavor, being very refreshing, and, notwithstanding the process of canning, it remains rich, juicy and sprightly.

Louise Bonne de Jersey—Large size; oblong, pyriform; pale green in the shade, but overspread with brownish red in the sun; very juicy and melting, with a rich and excellent flavor; a profitable market variety. Succeeding better on the quince (as a Dwarf tree) than on the pear root. In season during September and October.

New England Beauty—(Baron 'DMilo) Flesh white tinged with orange; fine grained, skin yellowish russet, with red cheek; tree a vigorous upright grower and very productive. A valuable market sort. November to December.

President—A very large, handsome pear; greenish yellow with red in the sun. Flesh juicy, with an agreeable vinous flavor. November.

Rutter—Of American origin and one of our most valuable pears. Fruit medium to large; nearly globular; skin rough, greenish yellow, sprinkled with russet; flesh white, moderately juicy, nearly melting, sweet, slightly vinous; good quality. Tree an upright grower and an early and abundant bearer. October and November.

Seckel—Small size; yellowish russet, with a red cheek; flesh whitish, buttery; very juicy, and melting, with a peculiarly rich, spicy flavor and aroma. A most prolific bearer. September and October.

Sheldon—(Should only be sold as a Standard.) Large size; roundish; greenish yellow, mostly covered with thin, light russet; very juicy, melting, sweet and vinous; a fine grower and good bearer, and fine quality, *but does not succeed on the quince (as a Dwarf.)* In season during October and November.

WINTER VARIETIES.

Duchess de Bordeaux—Large size; greenish yellow, with lines of russet; flesh buttery, juicy and sweet, with an agreeable flavor; a very productive and valuable winter variety. In season from November to January.

Lawrence—Above medium size; yellow; tender and melting, and of excellent quality; one of the best winter pears. In season during mid-winter.

Mount Vernon—Medium size; light russet, red in the sun; flesh inclining to yellow, juicy and aromatic. Tree a good grower and an early and abundant bearer. In season during mid-winter.

President Drouard—A variety recently introduced from France, highly recommended for its rich flavor and great keeping qualities. Tree a vigorous grower. Fruit large and handsome; melting and juicy, with a delicious perfume. March to May.

Vicar of Winkfield—Large size; long; rich yellow when fully ripe; very vigorous and productive.

SPECIAL LIST—IRON CLAD PEARS.

The pear is shown by experiment to be less hardy than the apple, and cannot be grown successfully where the seasons are short, and is liable to injury from cold in winter. We cannot recommend its culture beyond the latitude of forty-four degrees north, although some fine specimens are ripened beyond this point. The varieties we recommend are recognized as the most hardy, and are often grown quite successfully as far north as Bangor, Maine, and Montreal and Quebec.

Clapp's Favorite....August and September.	Eastern Belle.....September.
Flemish Beauty.....September and October.	

SELECT DWARF PEARS.

The Pear, when budded upon the root of the quince as a stock, assumes a dwarf habit, and seldom grows above ten feet in height, when properly trained. To such persons as have less space in their gardens or grounds than is required by large growing trees, the dwarf varieties offer special inducements and opportunities for success.

In all sections adapted to Pear growing, the dwarf tree will produce fruit of good size and quality with no more than ordinary care.

In planting Dwarf Pear trees, the stock on which they are budded, and no more, should be under ground. They will then stand firmly and not lose their dwarf character by the rooting of the standard stock. With the soil made rich and well tilled, and about one-half the summer's growth cut off each spring, Dwarfs Pears are everywhere successful. The side branches should not be removed higher than one foot from the ground on Dwarfs, while Standards may be trimmed to the height of three or four feet if desired. Train in pyramidal form.

SEE DIRECTIONS UNDER STANDARD PEARS FOR GATHERING AND RIPENING DWARF PEAR FRUIT.

The selection of varieties in the Dwarf sorts is of more importance than is generally supposed, as it is a well established fact that certain kinds do not thrive well on the quince root. When dissatisfaction and failures occur, they frequently arise from an unwise selection of varieties, and the Nurseryman is blamed when often, at the outset, the purchaser insisted upon the choice of a variety that could not be recommended as reliable.

We are able to furnish other sorts, but submit the following list of those best suited to be grown as Dwarfs, in full confidence that selections made from this list may be grown successfully on the quince stock, and give entire satisfaction.

The Description of the Fruit is Identical with the Standard Pear.

SUMMER VARIETIES.

Bartlett.	Lawson.	Rutter.
Clapp's Favorite.	Manning's Elizabeth.	Tyson.
Flemish Beauty.	Osband's Summer.	

AUTUMN VARIETIES.

Beurre d'Anjou.	Howell.	Seckle.
Belle Lucrative.	Keiffer.	
Duchess d'Angouleme.	Louise Bonne de Jersey.	

WINTER VARIETIES.

Lawrence.	Mount Vernon.	Pt. Drouard.
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SELECT CHERRIES.

The Cherry thrives best on a sandy or gravelly soil and there attains its highest perfection, but will do very well in almost any situation except a wet one. It is one of the most ornamental of all fruit trees, which, with its delicious fruit, makes it very desirable for planting near the dwelling, where beauty and shade, as well as fruit, are so much sought for and so desirable.

We divide them into two classes: Hearts and Bigarreaus, and Dukes and Morellos. The first are strong and vigorous growers, making large, open, spreading heads or tops, are best suited for the purpose of shade, and produce large, heart-shaped, sweet fruit. The Dukes and Morellos are all of slower growth, and do not usually attain so large a size, but are more hardy, less liable to get injured by bursting the bark, and produce a more acid fruit.

The cherry can be grown for the market with great profit. Many varieties are regular and abundant bearers.

For remedies for Diseases and Insects effecting this Fruit, see last pages in this book.

HEARTS AND BIGARREAUS.

Black Eagle—Fruit large; heart shaped; skin deep purple; flesh deep purple, tender, rich and highly flavored; tree vigorous, hardy and moderately productive. Ripens early in July.

Black Tartarian—Fruit very large; heart shaped, with an uneven surface; skin bright black; flesh purplish, tender, rich and good. Tree an upright grower and very productive. Ripens late June and early July.

Governor Wood—Fruit large; heart shaped; light yellow, nearly covered with red; flesh rather firm, juicy and excellent; tree vigorous and productive. Ripens last of June.

Napoleon Bigarreau—Fruit of the largest size; pale yellow, with a bright red cheek; flesh very firm, juicy and when fully ripe, of an excellent flavor. Tree vigorous and productive. Ripens early in July.

Rockport—Fruit large; obtuse heart shaped; skin pale amber, light red in the sun; flesh rather firm, sweet and excellent. Tree vigorous, erect and produces well. Ripens late June and early July.

Schmidt's Bigarreau—A most promising cherry; fruit of immense size; of a rich deep black; flesh dark, tender, very juicy, with a fine flavor; bears abundantly, and is very desirable for the table. Middle of July.

Stuart Bigarreau—A new seedling cherry, *two to three weeks later* than other varieties; color a showy light red; good size; tree a vigorous grower and hardy, and is extremely productive, making it very desirable for family use and market purposes. Mr. Stuart's attention was first called to this cherry, by noticing baskets of it in a canning establishment, and while other varieties were all gone, *this was still perfect fruit*. The original tree has fruited *each season* for the last fifteen to twenty years.)

Yellow Spanish—Fruit large; obtuse heart-shaped; pale yellow with a bright red cheek; flesh firm, juicy, rich and high flavored; tree vigorous, spreading and an excellent bearer; succeeds over a large extent of country. End of June.

DUKES AND MORELLOS.

Early Richmond (KENTISH)—Fruit medium size; round; dark red; flesh melting, juicy and acid. Tree slender; not a rapid grower, but a great bearer. This is one of the most popular of acid cherries, for hardiness and for cooking purposes. Ripens through June.

Louis Philippe—A fine Duke and Morello sort; extra hardy; a vigorous grower and very productive; large size; rich dark red; flesh red, tender, juicy, with a mild, sub-acid flavor. Middle to last of July.

May Duke—Fruit large; heart shaped; skin, when fully ripe, deep red; flesh tender, melting, rich and finely flavored; tree vigorous, hardy and very productive; ripens gradually through the month of June.

Montmorency Large—One of the very finest acid cherries; tree very hardy and an immense bearer; commences to fruit while young, and is loaded annually thereafter with fine crops; fruit of good size; fine flavor; bright, clear, shining red; valuable everywhere, especially for northern latitudes; about a week later than Early Richmond.

Morello English—Large; dark red, nearly black; tender, juicy, sub-acid; tree dwarf and slender.

Olivet—It is a very shining deep red, and continues fruiting through most of June and July without losing its quality. Fruit large; flesh red, with rose-colored juice; tender, rich and vinous, with mild, sub-acid flavor; as fertile and productive as the best of the Duke sorts, and probably the largest of this class.

Ostheim or Russian Cherry—A hardy cherry, imported from the nurseries of Dr. Regel, of St. Petersburg, Russia. It has been tested in the severest winters of Minnesota and found to be perfectly hardy. Charles Downing thus describes it: "Fruit large; roundish, oblate; tender, juicy almost sweet, sub-acid; very good. Season, middle of July."

Wragg—This is supposed to have hailed from Northern Germany. It is a good grower and said to be an immense bearer; quite late and a valuable cherry.

Windsor—A seedling originated in Windsor, Canada. Fruit large; liver colored; resembling the Elkhorn, nevertheless quite distinct, and ripens three or four days after that variety; flesh remarkably firm, sweet, and of a fine quality. Tree hardy and very prolific. Late.

SELECT PLUMS.

The plum attains its greatest perfection on a strong, clay soil, where they grow the most thriftily, and suffer the least from the Curculio and Black Knot, and, as is the case with all other fruits, they are greatly benefitted by thorough cultivation.

Plums do the best where a number are planted together, as insects do not destroy the fruit so badly where there is a good deal of fruit produced in a small space.

We have a fine orchard planted 12 ft. each way. Trees in this orchard four years planted have produced already heavy crops. We have realized as much as \$12 net from one tree but a few years planted. It is not desirable to multiply varieties for orchard purposes, but rather to plant several of each kind selected, as by so doing the orchardist will get a good amount of each kind of fruit to ship, and as few kinds ripen at the same time, he can thus extend his season of shipment.

We have found the best manner of putting plums up for shipment to be as follows: Pack baskets holding about ten pounds each, being particular to put in no inferior fruit, shipping to such towns as do not produce them extensively. Make an arrangement a few weeks before shipping time with parties to sell them, and ship by express. Rapid shipping facilities are such now that it is not necessary that a man should lay out an orchard in or near a large town or city, unless his grounds are located so; distant markets can be reached in a very short time through the different express companies.

For remedies for Diseases and Insects effecting this Fruit, see last pages in this book.

Abundance—See Botan.

Beauty of Naples—A good bearer, and of most excellent quality; color greenish yellow, somewhat striped; fruit of good size; tree is hardy and a vigorous grower. We consider it one of the best of the new sorts.

Botan—(Abundance) Lemon yellow ground, nearly overspread with bright crimson and heavy bloom; large to very large; oblong, tapering to a point; flesh orange yellow, melting rich and highly perfumed. Imported from Japan. Aug.

Bradshaw—Large size; reddish purple, with blue bloom; flesh juicy; tree vigorous and productive. August.

Burbank—In general character similar to Botan, but of deeper color and ripening later; fruit large and nearly globular; flesh a deep yellow, very sweet, with a peculiar and very agreeable flavor; tree a vigorous grower, and bears young. A Japanese variety; last of August.

DeSoto—A good grower and very hardy. An improved variety of the Chickasaw. Color yellow, nearly covered with a bright red; good flavor. Productiveness is increased by planting a number of them near together, or grouping them with other kinds in a cluster. Season first September.

Duane's Purple—Fruit large size; roundish oblong; color inclining to purple and very handsome; flesh juicy and very good; tree a good grower, and bears abundantly. Ripens early in September.

Fellemburg—(French or Italian prune) An excellent late variety; oval; purple; flesh juicy, rich and delicious; free stone; valuable for drying. Tree a free grower, and very productive. September.

Forest Garden—Well adapted for the north, being very hardy. Fruit is large for a native plum; nearly round; mottled red and yellow; very sweet and juicy. Productiveness is increased by planting a number of them near together or grouping them with other kinds in a cluster. Season first September.

German Prune—Large size; long oval; dark purple; of an agreeable flavor. In season during September.

Guii—Fruit very large; deep bluish purple, covered with thick bloom; flesh yellowish green, sweet and pleasant; tree a great and very early bearer, hardy and rapid grower; a new variety, and generally regarded as of great value for market by the plum growers along the Hudson River. Ripens from the first to the middle of September.

Hudson River Purple Egg—Highly esteemed by growers along the Hudson River; described as one of the richest and finest flavored plums we have; stone free; fruit good size, resembles the German Prune, but a little larger with a nice bloom; good bearer; tree bears young. Middle September.

Imperial Gage—One of the most productive; fruit rather large; green with yellow when ripe; flesh juicy, rich and delicious; a strong, vigorous grower. Middle of August.

Kelsey's Japan—This wonderfully attractive variety was imported into California some years since. Fruit large to very large; heart shaped; rich yellow, nearly overspread with light red, with a lovely delicate bloom; flesh firm and melting, with remarkably small pit. Tree not quite as hardy as the peach.

Lombard—Above medium size; violet red; flesh yellow, juicy and pleasant; of good quality, and great bearer; hardy and productive; valuable most anywhere. September.

McLaughlin—Fruit large; greenish yellow; sugary and luscious, with a fine flavor. Tree very hardy, vigorous and productive. Last of August.

Masters—A new plum, originated in Nova Scotia. Tree very hardy and wonderfully productive; color blue black; size about the same as the German Prune; quality excellent; flesh fine grained and rich.

Mogul—Introduced from England. Fruit large; skin dark purple; flesh pale yellow, firm, juicy, sweet, sprightly, subacid; tree very hardy; a very strong and vigorous grower. We consider this one of the most valuable market varieties yet introduced. Last of September.

Monroe—Medium size; greenish yellow; flesh firm, rich and sweet; tree very vigorous and healthy; bears abundantly. In season during September.

Moor's Arctic—Size medium or below; skin purplish black, with a thin blue bloom; flesh greenish yellow, juicy, sweet and pleasant flavor. Charles Downing speaks of it as follows:—"A new, hardy plum, which originated on the highlands of Aroostook County, Maine, where unprotected and exposed to Arctic cold, it has for many years borne enormous crops, and claimed to be the hardiest plum known." Tree healthy, vigorous, an abundant and early bearer. September and October.

Niagara—Of extra large size and first-rate flavor. Color dark blue. Good bearer; not liable to rot. E. Moody & Son, of Lockport, N. Y., says it is one of the most profitable varieties to grow, and ranks very high. Ripens about August first.

Prince Engelbert—Very large and long; deep purple; quality rich and excellent. Tree very vigorous. End of August.

Prince's Yellow Gage—Rather large; golden yellow; flesh rich, sugary and melting. Tree very hardy and productive. August.

Prunus Simoni—A distinct species from China. Growth erect, flowers small, white, appearing early in spring; fruit large; flattened and of the size and appearance of a nectarine, and of a brick-red color; flesh yellow, with a peculiar aromatic flavor.

Quackenboss—A popular Hudson River variety; large; deep purple; flesh greenish yellow, juicy and sweet, with a sprightly flavor. September.

Reine Claude de Bavay—One of the best foreign sorts; large; greenish yellow, with a little red; flesh juicy, melting and sugary, with a rich, excellent flavor; vigorous and remarkably productive. September.

Richland—Greenish purple; medium; firm sweet and excellent; a prolific bearer, and reliable. Early.

Shippers' Pride—Originated in the state of New York, near Lake Ontario. An unusually thrifty grower; very productive. Fruit of large size and nearly round; color handsome dark purple; quality fine, juicy and sweet; excellent for canning, and an unusually good shipper. Ripens from first to middle of September; a splendid market plum.

Smith's Orleans—Very large; reddish purple; flesh yellow, firm and juicy, with a rich, brisk, vinous flavor. Grows well and bears abundantly. Last of August.

Stanton—The Stanton is a chance seedling that had its origin in Albany County, N. Y. Tree a vigorous grower, upright in habit; fruit roundish oval; medium to large size; color deep bluish purple covered with a rich bloom; flesh yellow, firm, rich and sugary, and parts freely from the stone. Time of ripening, early October.

Washington—Very large, roundish oval; yellow with slight crimson blush; very sweet, delicious for canning and for the table; vigorous and productive. First of September.

Weaver—Dr. Ennis, of Clinton, Iowa, kindly furnishes the following description: "It is one of our ordinary wild plums, of fine size, good flavor and wonderfully productive. The tree is very hardy, never injuring in even our severest winters. Where good cultivated plums can be raised, this plum may not have much value, but in the west and extreme north it is valuable. Productiveness is increased by planting a number of them near together or grouping them with other kinds in a cluster.

Wild Goose—A variety of the Chickasaw; fruit medium size; roundish, oblong; reddish yellow.

Yellow Egg (MAGNUM BONUM YELLOW)—Very large and beautiful; yellow; a little coarse but excellent for cooking; vigorous and productive. August.

SELECT PEACHES.

This is the most desirable fruit during its season, which is now happily lengthened by the introduction of several new and choice varieties.

Its easy culture, early bearing, and the variety of uses to which it is adapted, make it one of the most indispensable of fruits. A warm, sandy soil is the most desirable location for this fruit. It should be dry, and moderately rich. The trees should be examined annually in June and September and the borers carefully taken out.

To secure healthy, vigorous and fruitful trees and fine fruit, the following points must be well attended to in peach culture. 1st. Keep the ground clean and mellow around the trees, and give them an occasional dressing of wood ashes. 2d. Keep the heads low—the trunks ought not to exceed three feet in height. 3d. Attend regularly every spring to pruning and shortening the shoots of the previous year's growth. This keeps the head round, full and well furnished with bearing wood. Cut weak shoots back one-half, and strong ones one-third; but see that you have a sufficient supply of fruit buds. Sickly and superfluous shoots should be cut out clean.

It should always be borne in mind that the fruit is introduced on wood of the last season's growth, and hence the necessity of keeping up a good supply of vigorous annual shoots all over the tree.

We dig our peach trees in the fall late enough so that they have had sufficient time to become thoroughly ripened and matured, then put them in our cellars during the winter. This ensures their perfect condition in the spring, and although this plan causes some extra expense and care, we feel repaid for the outlay in the assurance that the trees when delivered to our customers will be vigorous and healthy, and in fine condition.

For remedies for Diseases and Insects effecting this Fruit, see last pages in this book.

Alexander's Early—Introduced from Illinois. Tree vigorous and productive. Fruit greenish white, nearly covered with deep, rich red; flesh whitish, sometimes stained next the skin, half melting, juicy and sweet; stone small and adheres but slightly; tree healthy and vigorous. July.

Amsden's June—Originated near Carthage, Mo. Fruit greenish white, nearly covered with light and dark red, somewhat mottled; of very good quality; exceedingly early. Tree hardy, healthy and vigorous; ripening about with Alexander, July.

Beer's Smock—A seedling of Smock Free; similar in character but much improved. The tree is a vigorous grower and considered one of the most profitable disseminated. Well calculated for distant market shipments, and is also very desirable for canning and drying purposes, a branch of business that is yearly becoming more important. Late.

Comet or Bilyeus—Fruit large; skin creamy white, with a reddish blush on one side. A late ripening peach and first-class quality. Flesh very white and firm. One of the best canning and late shipping peaches.

Crawford's Early—Very large; yellow, with red cheek; flesh yellow, rich, sweet and luscious. One of the best early yellow peaches. September.

Crawford's Late—Very large; same color and flavor as the preceding; tree vigorous and productive. Ripens a few weeks later than Early Crawford.

Early Canada—Originated at Jordan, Canada. Of good size, firm quality and handsome appearance. Its earliness, origin, and the fact that the flesh cleaves from the stone almost as freely as with the later varieties, creates an unusual demand for trees of this variety.

Early Rivers—Large size; pale straw yellow, with a delicate pink cheek; flesh melting, with a rich flavor.

Early York—Medium size; greenish white, dotted with red, with a deep blush on the sunny side; juicy, tender and rich; very productive.

Elberta—Large size; beautiful color, yellow with red cheeks; flesh yellow and melting; delicious, of the very highest quality. The tree comes into bearing young, and is distinct in growth from any other sort. A seedling of the Chinese Cling, but entirely free stone. September.

Foster—Resembling the Early Crawford in general character and appearance, and said to be a seedling of that popular variety. Originated in Massachusetts. Ripens with, or a few days earlier than the Early Crawford.

Garfield—A new peach; originated in Cayuga county, N. Y. Flesh yellow, very rich and juicy; color deep orange red, becoming red on the exposed side, and is very attractive; foliage large, green, glossy and peculiar. Middle of September.

Globe—Tree vigorous and productive. Fruit very large; globular; of a rich golden yellow, with red blush; flesh firm, juicy, yellow. Ripens second week in September.

Hynes Surprise—Tree a good grower; fruit medium sized; skin clear, dark vivid red on the sunny side, melting to a yellow on the shaded side; flesh high flavored, melting and juicy. A free stone, ripening the last of July. A valuable early variety, very hardy in fruit bud.

Heath Cling—Very large; creamy white; flesh white, juicy and rich; too late for the north; succeeds well at the south; adheres closely to the stone. (*This is the only really cling-stone we grow*)

Hill's Chili—Originated in Monroe county, N. Y. Fruit medium size; skin deep yellow, shaded with dark red; flesh juicy, melting, vinous. Tree hardy, *vigorous* and productive; a good market sort.

Lord Palmerston—Very large; skin creamy white, with a pink cheek; flesh firm, yet melting; very juicy and rich. Season end of September.

Longhurst—A new peach which originated in Ontario, Canada, and which, as might be supposed from its birthplace, is extremely hardy, bearing annually, large crops where others will not bear at all. The fruit much resembles the Crawford Early; being of excellent flavor, size and color, though a little more oblong and downy. The season of ripening; and the extreme hardness of the tree make this variety invaluable in the colder climates. It ripens a little later than the Crawford Early.

Morris White—Fruit medium size; color dull white; flesh white to the stone; juicy and sweet; valuable for perserving; tree a fair grower and moderately productive. Middle of September.

Old Mixon Freestone—Large size; yellowish white; with a deep red cheek; flesh white, tender and juicy. Middle of September.

Richmond—New; large; globular; skin orange yellow, with a deep red cheek; flesh yellow, pink at the stone, very juicy, fine flavor, resembling the Early Crawford in quality, but less acid; ripens a few days later than the Early Crawford. Tree strong grower and hardy. First of September.

Salway—Fruit large; roundish; deep yellow, with a rich, marbled, brownish red cheek; flesh yellow, firm, juicy, rich and sugary. A new English variety; promises highly as a late, showy market sort. Late.

Schumaker—One of the earliest peaches; of very large size, some samples measuring eight or nine inches in circumference; stands the winters as well as the Early Crawford; flesh yellowish white and quality good; freestone; a good shipper; stone very small for so large a Peach. Ripens few days before Alexander.

Smock—(SEE BEER SMOCK).

Stevens' Rareripe—New, and said to be producing remarkable crops in the vicinity of the Hudson River, which are sold at high rates. Fruit resembles our enlarged Old Mixon Free, being of very high color. Very productive; commences to ripen immediately after Late Crawford, and continues three to four weeks. Last of September and first of October.

Stump the World—Very large; color creamy white, bright red cheek; flesh white, juicy and highly flavored; vigorous and productive. Ripe last of September.

Waterloo—A promising variety of recent introduction; size medium to large; pale green with crimson cheek in the sun; flesh tender and juicy with sweet vinous flavor; ripens very early and keeps well.

Wheatland—*Thirty-nine weighed eighteen pounds.* Awarded first prize for size, quality and beauty at New York State Fair. Originated with Mr. D. S. Rogers, of Wheatland, Monroe County, N. Y. The fruit is extra large size, and with its handsome golden color and rich crimson tinting, is altogether one of the most brilliant and tempting fruits we have ever seen. Ripens between the Early and Late Crawford; is larger than either of these favorite sorts, and of most excellent quality; very firm and bears shipment well.

Willett—Large; yellow with red cheek; freestone; highest quality, melting and juicy; very productive, producing specimens very even in size; tree a good grower, and very hardy; stands changes of climate well. September 15th to 20th.

Wonderful—This tree originated in Burlington County, New Jersey, some years since. Large to very large; smooth, almost globular with a slightly pointed apex; richest golden yellow, largely overspread with bright red, very beautiful; flesh yellow, rich, high flavored and delicious, and exceedingly firm. A perfect free stone. Tree of strong vigorous growth, and a regular annual bearer. Very late, succeeding the Smock.

Wager—Fruit fair size; good quality; flesh bright yellow; skin golden yellow, with a red cheek. Tree eminently hardy, healthy, long-lived and an enormous bearer, yielding good crops when most sorts fail to bear. Freestone. Highly esteemed for canning. Ripens a week later than the Crawford Early.

SELECT APRICOTS.

The apricot is one of the most beautiful and delicious of fruits ; but like the plum, is liable to be attacked by the curculio, and requires the same treatment to prevent its ravages. The trees succeed best, and the crop is more certain, when planted on a northern exposure, so as to escape injury from late spring frosts, as the buds and blossoms, starting too early in spring, are often injured from that cause. They are usually budded on the peach or plum stock.

VERY CHOICE.

New desirable varieties that have been thoroughly tested, and have the highest merit.

Chinese—(OR SHENSE.) Size large; yellow with red in the sun; quality superior. July 20th.

Early Moorepark—Size large; yellow, with red cheek; freestone; quality superior. Ripens about July 20th.

Harris—Size medium; yellow with red cheek, freestone; quality first-class; tree a good grower and hardy. July 1st.

Smiths Early—Size medium; yellow mottled with red on one side; rather long; freestone, quality first-class. Tree a good grower. July 1st.

OLDER VARIETIES.

Early Golden (DUBOIS)—Fruit small; roundish oval; color pale orange; flesh yellow, rich and sweet. Ripens middle of July.

Moorpark—Fruit large size; round; deep orange, or brownish red in the sun; flesh firm, rich and juicy; tree of short, stout growth. Ripens early in August.

Peach—Large size; roundish; skin yellow, with a brownish cheek; flesh yellow, juicy, rich and highly flavored. August.

RUSSIAN APRICOTS. (Named Sorts.)

New. A hardy race of apricots.

Alexis—Tree hardy; an abundant bearer; fruit yellow, with red cheeks; size large to very large; flavor slightly acid, rich and luscious; season July 15th.

Alexander—Tree hardy; an immense bearer; fruit large size; color yellow, flecked with red, both skin and flesh; a beauty; flavor sweet, delicious; shaped oblong; season July 1st.

Catherine—Tree hardy, vigorous and productive. Fruit medium size; color yellow; flavor mild, sub-acid, good. Season July 20th.

Gibb—Tree hardy and symmetrical. A good bearer. Fruit medium size; color yellow; flavor sub-acid, rich and juicy; season June 20th.

J. L. Budd—Tree hardy, strong grower and profuse bearer. Fruit large size; color white with red cheeks; flavor sweet, extra fine, with a sweet kernel, as finely flavored as an almond, and used for the same purpose. Season first of August.

Nicholas—Tree hardy; a splendid bearer. Fruit medium to large; handsome; color white; flavor sweet, melting. Season July 10th.

SELECT NECTARINES.

They are subject to the attacks of the curculio, and the same treatment is recommended as is necessary to secure the plum in perfection. They are budded on the peach stock.

Early Violet—Medium size; yellowish green, with a purple cheek; flesh pale green; melting, freestone. Last of August.

Red Roman—Greenish yellow and red; flesh greenish yellow, freestone. September.

SELECT QUINCES.

The quince is generally well known and highly esteemed for cooking and preserving. P. M. Augur, state pomologist of Connecticut, writes: "The quince likes a deep rich loam, but not sour, stagnant soil. Again, the plow running deep and close to the quince tree inflicts a wrong not easily forgotten. The quince delights in sending out many feeding roots only a little below the surface. Hence, if culture is given, as is best, let it be careful and shallow. Adopt the rule of covering the soil in November with two inches of good, fine stable manure, evenly spread as far about the tree as the branches extend, and a little farther. In spring, fork this in carefully, and if you choose, mulch with some coarse material to smother the weeds; otherwise use the hoe. Follow this plan for three or four years and people will wonder how you raise such large and fine quinces."

There are ornamental varieties which are very beautiful and desirable. Description will be found in our list of "Flowering Shrubs."

Orange (APPLE-SHAPED)—Very large; bright golden yellow.

Champion—Fruit very large, fair and handsome. Tree very productive; *bears abundantly while young; flesh cooks as tender as the apple*, and without hard spots or cores; flavor delicate, imparting an exquisite quince taste and odor to any fruit with which it is cooked.

Meeches' Prolific—This new variety hails from New Jersey and is very highly recommended as a vigorous grower and immensely productive, frequently bearing fruit when but two years of age, and increasing the quantity yearly to such an extent as to require vigorous thinning to prevent injury to the tree from overbearing. It is shaped like a pear, with a smooth, fine skin, of a bright orange yellow, and very large under good culture; flesh fragrant and delicious flavor. Its cooking qualities are unsurpassed, being quite free from hard lumps.

Rea's Mammoth—A variety of the Orange Quince, of much larger size; a strong grower, and very productive.

SELECT NATIVE GRAPES.

The cultivation of the Native Grape has made wonderful and satisfactory progress within the past twenty years.

The soil for the grape should be dry and warm, thoroughly drained, deeply worked and well manured, always bearing in mind that a sunny exposure is desirable—a slope to the south or east is the best. If a northern incline must be had, only the hardy, early ripening sorts should be planted.

Vines should be planted eight to twelve feet apart according to the variety, as some of the more rapid growing sorts require nearly double the room of others, equally vigorous, but compact, short-jointed kinds. Grape vines should be top-dressed in the spring with well-decomposed manure or ground bone; slacked lime or ashes every third or fourth year, is also beneficial.

To secure the best results, annual and careful pruning is essential. If planted in the spring, at the time of transplanting cut back to two eyes. If planted in the fall, defer pruning to two eyes until early spring. First fall, or after one summer's growth, leave only four eyes at about equal distance, for four upright shoots. Rub off all other eyes as they start in the spring. Finer grapes and a larger crop will be secured where there is not an excess of vine. For the subsequent pruning of vines, as well as trees, planters would do well to consult some practical works on that subject.

A trellis is made by planting posts say 12 to 14 feet apart, then stretch four wires eighteen inches apart, letting them pass through staples driven into the posts. The wires should be loosened for the winter, as they contract with cold and would otherwise be liable to draw the posts from their places. When, however, it is not convenient to make a trellis, very good results may be had by simply training to stakes, pursuing the same system of cutting away the old wood and allowing fresh bearing shoots to grow every year. Often a fence or rock may be converted into usefulness and beauty by putting a grape vine on the sunny side and using it as a trellis, and the steep hill-sides of many a farm, once thought worthless and unsightly, have become the most productive and profitable acres of the establishment.

The following varieties have a tried reputation, and may be relied upon as possessing merit.

For remedies for Diseases and Insects effecting this Fruit, see last pages in this book.

Brighton—A large bright-red grape. Its remarkable hardiness of vine, large and compact bunch, delicate skin, almost seedless pulp and rich flavor are qualities that make it one of the most desirable sorts. Has thick, large foliage, and is thus enabled to stand the heat of summer. Being a vigorous grower, it exhibits extreme hardiness and is enabled to endure the winter in the colder sections. Valuable both as a family grape and for vineyard purposes. Early.

Champion (TALLMAN'S SEEDLING)—A large, black grape; hardy and productive, though it has not all the rich quality and delicate flavor of the finer varieties. Its earliness insures a crop in cold latitudes.

Concord—Bunches large; berries large, round, black, moderately juicy and sweet; universally healthy, vigorous and productive; ripens ten days earlier than Isabella; does not carry well as a market sort, and if left to ripen before being gathered, the fruit is inclined to drop from the bunch.

Delaware—Bunches rather small, compact, and often shouldered; berries small, round, rose-colored; skin thin; flesh juicy, sweet, with a vinous flavor. Ripens early in September. Vines moderately vigorous, hardy and productive; oftentimes injured by allowing it to over-bear.

Empire State—A new white grape of excellent quality; bunch large and shouldered; berry medium to large, and roundish oval; color white, with light tinge of yellow, covered with thick, white bloom; a good keeper; the vine is vigorous and hardy. Ripens early, almost with the Concord.

Eaton (THE NEW BLACK GRAPE)—This very promising new grape is *similar in foliage to Concord, and in growth, health, and hardiness, is in every respect its equal*, while in size of bunch and berry it is much larger and more attractive in appearance. DESCRIPTION—Leaf large, thick, leathery, covered on the underside with a thick brownish-yellow down. Bunch very large, weighing from twelve to twenty-five ounces; compact, double-shouldered; berries very large, many one inch in diameter; round; black, covered with a heavy, blue bloom; adheres firmly to the stem; skin thin, but tough; pulp tender, separating freely from the seeds and dissolving easily in the mouth; quality rich, very juicy. Ripens with Concord, or a little earlier.

Hartford Prolific—Bunches rather large and moderately compact; berries large, round, black, covered with bloom; hardy and productive. Ripens early.

Moore's Diamond (NEW)—Originated by Jacob Moore. Described as a pure native; leaf resembling Concord; free from mildew; bunch large, compact; berry about the size of Concord; color greenish white, with a yellow tinge when fully ripe; flesh juicy, sweet to the center, free from foxiness, and almost without pulp; quality very good; vine vigorous and productive, while the skin is thin, it is sufficiently tough to stand handling and shipping well. Ripens about with Delaware.

Moore's Early—This new, hardy variety was raised by John B. Moore, of Concord, Mass., and was fruited in 1872. The fruit is very large and showy, and is remarkable for size, beauty, productiveness, earliness and hardiness. It matures about ten days before Hartford Prolific, and twenty days earlier than the Concord. It has received several first premiums from New England fairs and the Massachusetts Horticulture society. Fruit black, very large and handsome, with a heavy bloom. Quality about the same as Concord; vine exceedingly hardy. It has stood twenty degrees below zero, and has been exempt from mildew and disease.

Niagara—The originators says: "This new white grape originated in Lockport, N. Y., in 1868, and is a cross between the Concord and the Casady; first fruiting in 1872; it has since regularly borne large crops of fine fruit. The vine is a remarkably strong grower and very hardy; the leaves are thick and leathery and dark, glossy green; bunches very large and uniform and very compact; berries as large or larger than Concord, and skin thin but tough, which insures their shipping qualities; quality good, very little pulp, melting and sweet to the center; ripens with the Hartford."

Pocklington—Originated at Sandy Hill, N. Y. Vines very vigorous, hardy and productive; bunch and berry of good size; color a light lemon-yellow; flesh moderately tender, sweet, with a peculiar aromatic flavor; ripens with Concord.

Rogers' No. 4, Wilder—Bunches large, shouldered, compact; black; flesh tender, sweet and sprightly; quality best; vine vigorous, hardy and productive. Ripens with the Concord.

Rogers' No. 9, Lindley—Bunches and berries of medium size; pale red; sweet and highly flavored. Ripens soon after the Delaware.

Rogers' No. 15, Agawam—Bunches large, generally loose; berries large, round; color dark red or maroon; flesh tender, juicy, vinous, with a high, peculiar flavor. Vine very vigorous, hardy and productive; does not require as high culture as some. Ripens about with Concord.

Rogers' No. 19, Merrimac—Bunches rather large, short and broad; compact; berries large; round; black, with a slight bloom; flesh tender nearly to the center; juicy, sweet and highly flavored. Ripens early.

Rogers' No. 22, Salem—Bunch large, compact, shouldered; berries large, round, Catawba color; skin thick and firm; flesh sweet and tender, with a rich aromatic flavor. Vine moderately vigorous, hardy, healthy; ripens early when not overstocked, sometimes as early as Delaware or Hartford. It is a splendid keeper and of good quality.

Vergennes—A fine red variety of delicious flavor. Found by chance in the garden of Mr. W. E. Greene, Vergennes, Vt. Very hardy and a strong grower. Clusters large; berry large, meaty and tender. Ripens with Hartford Prolific.

Worden—Said to be a seedling of the Concord. Bunch large, compact, handsome; berries large—larger than those of Concord. It ripens a few days earlier and is superior to it in flavor.

SELECT CURRANTS.

Currants may be planted with entire safety either in fall or spring, and have many good qualities to recommend them, among which are perfect hardiness, ease of culture, great productiveness and long season. By using powdered White Hellebore, Paris Green or London Purple as a remedy against the currant worm, the certainty of a full crop each year is secured. Best results with this fruit are obtained by clean cultivation, thinning out the bushes and giving an occasional supply of manure.

For family use an abundant supply of fruit can be secured for both the table and for jelly, preserves and canning, by setting aside a small portion of the garden, or a strip of land near the fence, and planting any or all of the kinds we name. The housewife will appreciate having the fruit growing on the premises so that it can be used when in just the right condition. If all the fruit is not needed for family use, there is no trouble in disposing of the surplus at a good price, for there is a demand for good currant fruit in the market.

For remedies for Diseases and Insects effecting this Fruit, see last pages in this book.

Cherry—Very large; red; a fine grower and bearer.

Fay's Prolific—A new red variety of great value on account of its fine quality and the extraordinary size of its bunches. The bunches are really enormous, being sometimes over seven inches in length.

Lee's Prolific Black—The fruit is of enormous size, wonderfully productive, and of agreeable flavor; long stem of large berries. Very desirable for canning, and while a taste for this fruit often has to be acquired, it is always highly esteemed by those who are accustomed to use it. Plants are very hardy and it is well suited to cold country sections.

Newark—We have for several years been growing and testing this new currant, which has, after careful and painstaking examination, entirely satisfied us with its many desirable and superior qualities. First—it is a great producer; second—it is of excellent quality and will hang long on the bush; and lastly—it is a strong and vigorous grower, and produces a good crop the second year after transplanting. *We have the entire and only stock.* The fruit of this currant is red; size above medium; sub-acid; bunch of good length. The fruit is borne in masses on the bush.

White Grape—Very large; white; mild flavor; excellent quality and good for table use; very valuable.

SELECT RASPBERRIES.

This fruit succeeds best in a moderately rich, mellow soil. They require good cultivation, and that the ground be kept clear of weeds. Most of the suckers should be cut away to throw the strength into the stock for bearing. All the old canes should be removed immediately after the bearing season is over.

All of the tender or half tender kinds will be greatly benefited by protection during the winter, which may be secured as follows: Raise the earth into a mound or bank between two hills or plants, and bend the plants down so as to meet and fasten them; cover with a little earth or coarse litter, which will preserve them perfectly till spring, when they should be loosened, raised and tied to stakes, or the canes may be tied to stakes and covered with straw.

Cuthbert (QUEEN OF THE MARKET)—Reports from all parts of the country uniformly rank the Cuthbert high. It is a tall, vigorous grower, very productive and hardy, and remains in fruit a long time. Berries large; conical; deep rich crimson; very firm and of excellent quality.

Golden Queen—The originator says:—"Since the day it was found, I have employed every means of testing the variety, with the object of determining fully its character, and from my experience with it, I think it may be fittingly described as a variety with six cardinal virtues, viz: 1—In flavor, it rivals that high quality raspberry, Brinckle's Orange. 2—In color, a rich, bright creamy yellow, imparting to it a most appetising effect, both in the crate and upon the table. 3—In size, it challenges the large Cuthbert. 4—In vigor, it fully equals its parent, the Cuthbert. 5—In productiveness, it excels the prolific Cuthbert. 6—In hardiness, it has no superior.

Gregg—It originated on the Ohio River, near Lawrenceburg, Indiana. The berries are large, black, with a light bloom, comparatively free from seed, and in quality good. The growth of cane is very strong. As a market berry, it must prove exceedingly valuable, the fruit being very firm so as to ship in the best order.

Johnston's Sweet Black Cap—A variety of great merit; rather smaller than the Gregg; of same color; a good, strong grower; healthy and hardy. Ripens with Tyler. Stands up well in picking and handling. Its greatest merit is in its high quality and delicious sweetness of berry.

Marlboro—The new red berry; one of the hardiest, earliest, largest and best carrying berries known; of splendid quality, handsome color, and a great bearer. In regard to its earliness, the *Rural New Yorker* acknowledges the receipt of ripe fruit on the 26th of June.

Ohio—Very hardy, vigorous, and an enormous bearer; flavor superior, and will bear shipping well and keep long. This is one of the most valuable Black Caps yet introduced. It takes high rank for drying purposes.

Shaffer's Colossal—The plant is the strongest and largest grower we have, and is "iron-clad" in hardiness, and yields an immense crop of dark red berries. The fruit is large, firm, and of a sprightly sub-acid flavor. This is a Cap variety, and increases from the tips like the Black Caps.

Tyler—An early black raspberry. It ripens its entire crop within a very short period. Canes vigorous, strong and hardy, with foliage healthy and free from rust; wonderfully productive. Fruit of good size, jet black, with but little bloom; firm, and of sweet, pleasant flavor; valuable for market.

SELECT GOOSEBERRIES.

The gooseberry thrives best on a cool, deep, rich soil. It should be annually pruned in the spring. It requires about the same care as the currant. White Hellebore, Paris Green or London Purple will rid this bush from the currant worm. While it is usual to use all varieties of the fruit green, for canning and preserving, we would recommend canning the Downing when fully ripe. This manner of preserving requires less sugar, and makes a delicious sauce. The gooseberry has not received the share of attention due its merits as a preserving fruit, but is now coming into more general use, and is destined to receive its merited attention. Good, rich soil, as well for this as for the currant, will give best results. Lightly spading in a rich top dressing of manure is very desirable about the bearing plants. The varieties we offer are generally not subject to mildew, which has been such a source of discouragement to many growers. There has been a great increase of late in the demand for this fruit, and the interest in it is constantly growing.

For remedies for Diseases and Insects effecting this Fruit, see last pages in this book.

Downing—Large size, oval, greenish-white; plant very vigorous and hardy, with stiff, strong shoots; foliage heavy, covering the fruit from the sun and resisting mildew; bears most abundantly, and is profitable for market and home use. The best of all the American varieties.

Houghton's Seedling—Small to medium size, roundish oval; pale red; sweet; very productive and valuable.

Smith's Improved (SMITH'S SEEDLING)—One of the largest American varieties; valuable; oval form; light green when ripe; sweet and excellent. Plant vigorous, healthy and hardy. Raised from seed by Dr. Smith, of Vermont.

FOREIGN VARIETIES.

There are only a few of these that succeed here on account of their liability to mildew. The following varieties are believed to be exempt from these drawbacks, and we therefore offer them, believing they will meet every requirement of a first-class gooseberry.

Industry—Large size; dark red; hairy or rough; with a very pleasant and agreeable flavor; unequalled for size, flavor and productiveness.

White Smith—Fruit large; roundish, oblong and smooth; flavor first-rate and generally succeeds well.

SELECT BLACKBERRIES.

The same soil and cultivation that is recommended for the Raspberry will answer here. As soon as the plants are about four or five feet high, the points of the growing shoots should be clipped off. This operation should be repeated several times, until they assume the form of a bush, instead of the straggling plants usually seen, when it will be much easier to cultivate them and gather the fruit than would otherwise be the case.

Erie—The Erie is a chance seedling which sprung up on the shore of Lake Erie, in Northern Ohio, some ten years ago; its extra qualities having only been brought to public notice recently. It is certainly an acquisition to the list of Blackberries, being found to be a perfectly hardy as well as at the same time a first-class berry. It is a strong, healthy grower, free from diseases liable to attack the blackberry; productive as the Lawton and without its failings; very early, ripening even before the Wilson; of extra good quality; large, fine berries, jet black in color, firm in texture, making it necessarily a popular sort for distant shipment as well as for home market. Probably its greatest merit lies in its extreme hardiness, it having withstood a temperature of 25 degrees below zero; it will therefore be very desirable for our customers in northern climates.

Snyder—Extremely hardy; enormously productive; medium size; no hard, sour core; half as many thorns as Lawton or Kittatinny, and they are nearly straight and short.

Wachusett—This valuable variety was found growing wild. We quote the following description; "Fruit of medium size, oblong oval; moderately firm; sweet and good, and less acid than any other blackberry we have tasted. It is a good keeper, ships well, and is therefore valuable as a market berry. The plant is said to do equally well on light and heavy soils, and bear heavy crops where other varieties have failed. It is also very hardy and *freer from stiff thorns than other varieties.*"

DEWBERRY.

Lucretia—A trailing variety of the Blackberry. Ripens between the Raspberry and Blackberry.

ASPARAGUS.

See that the ground is well drained, naturally or otherwise ; work it up fine and deep and make it very rich with well rotted barn-yard manure. Locate the plants eight inches apart, in rows three feet apart. Spread out the roots in a trench made deep enough to permit their crowns to be covered with three or four inches of mellow earth. Give the bed liberal dressings of manure at intervals, and (except near the sea shore) three pounds of salt per square yard early every spring. Do not cut for use until the plants have grown two seasons. A bed once planted suffers no deterioration for thirty years or more, if it is properly attended to and well manured.

Conover's Collosal—This variety is much superior in size and quality to any other, being remarkably tender and fine flavored.

RHUBARB.

This should be grown in ground prepared as recommended for asparagus. Plant four feet apart each way.

Myatt's Linnæus—Those who have never grown this variety, which is of superior quality, will hardly recognize the old "Pie Plant." It is an early, tender variety, without being in the least tough or stringy, with a mild, sub-acid flavor.

NUT TREES.

Chestnut, American,
 " Spanish,
 Walnut, Black,
 " English.

} See under
 ORNAMENTAL TREES
 for descriptions.

ORNAMENTAL DEPARTMENT.

The rapidly increasing demand for Ornamental Trees and Plants is a marked indication of the growing tastes of the people. Many who have always planted largely of fruit-bearing trees, have made no effort to beautify their grounds, and the contrast between the well-filled orchard or fruit garden and the neglected door-yard is very striking. Intelligent men are now beginning to appreciate the money value which a fine lawn adds to their place, besides the personal satisfaction which it always gives. No investment gives a more certain return.

In climates where great extremes of temperature are experienced it is necessary to confine selections to only the most hardy ornamental trees and shrubs, and that our customers may be spared disappointment and unnecessary expense, we omit from this catalogue as far as possible, anything that is liable to suffer from the extreme cold.

DECIDUOUS TREES.

This class of Ornamental Trees, though they are without foliage during a portion of the year, are specially suitable for the lawn or garden, and most of them are well adapted for street planting. In the following list only the most distinct and desirable sorts are included, and while some varieties, which we do not mention, are not without beauty, we are confident the list is sufficiently large to satisfy those who have the most extended grounds, and desire the most complete assortment, and it contains none that will not, when properly located and grown, afford entire satisfaction. Our stock of Ornamentals is fine. We do not think it good policy for the planter to use large, over-grown, heavy stock, but believe that young, clean, smooth stock will insure the best returns.

HOW TO PLANT.—Flower gardens and graveled walks are beautiful and expensive, and require constant labor to keep them in order. Grass and trees are always charming and need but little care. In the laying out and planting of ground, have regard to

economy of labor. Let there be as few walks as possible ; cut your flower beds (not many) in the turf, and don't make a lawn a checker-board of trees and shrubs. Mass them on the boundry lines or in groups, leaving a broad expanse of green for the eye to rest on, and the mower to sweep freely over. If an unpleasant object is in sight, conceal it by planting free-growing trees ; if there is a pretty view, leave an opening. While it is not well to have large trees near the house, there should be at least one by the sunny corner for summer shade. Plant flowering shrubs and the smaller evergreens in circles or ovals. After the first two seasons it will do to let the turf grow about them, but mow the grass frequently, and top-dress with fine manure every fall and winter.

WHEN TO PLANT.—Usually Deciduous Trees, Shrubs and Vines can be planted spring or fall. In localities where the winters are severe we recommend spring planting. Spring planting is the best time for evergreens generally.

MULCHING.—When the tree, shrub or vine is planted, it is advisable, where possible, to mulch, spreading around it as far as the roots extend and a foot beyond, 2 to 4 inches deep of rough manure ; this is particularly necessary in dry ground, and entirely advantageous everywhere, both in spring and fall planting, as it prevents the ground from baking or cracking, and makes the earth an even temperature about the roots.

Even the most hardy ornamental trees, shrubs or vines, will well repay a little extra care and attention, as cultivation or mulching, during the first season or until they become thoroughly established in the ground ; the grass should not be allowed to grow around young trees, shrubs or vines, as the grass will deprive the newly planted stock of its necessary moisture.

BEECH (FAGUS).

PURPLE LEAVED (PURPUREA)—A remarkable variety, with very dark purplish foliage, changing to crimson, and again in the fall to dark purplish green, making a striking contrast with the green of other trees. Highly ornamental and desirable. When fully grown, 40 to 50 feet high.

CATALPA.

SYRINGA LEAVED (SYRINGAFOLIA)—A rapid growing tree, with large, heart-shaped leaves, producing pyramidal clusters of white and purple flowers in July a foot long, and when few trees are in bloom ; blossoms are quite fragrant. They are effective tropical looking trees. When fully grown, 25 to 35 feet high.

CHESTNUT (CASTANEA).

AMERICAN SWEET (AMERICANA)—Among our large collection of ornamental, native forest trees, the Chestnut is unrivalled for its beauty. When grown in open ground, it assumes an elegant, symmetrical form; the foliage is rich, glossy and healthy, and the whole tree is covered in early summer with long, pendant, tassel-like blossoms. It is especially desirable for the nuts, which it bears profusely a few years after transplanting. The Chestnut thrives well on any soil except a wet one. When nursery grown, bears transplanting well, and when once established, is a rapid grower, and soon comes into bearing.

SPANISH (VESCA)—A valuable species, both for ornament and fruit. Makes a handsome and large lawn tree. The fruit is larger than the common variety.

ELM (ULMUS)—For street or park planting there is no finer tree than the noble American elm of our own forests, and they and other varieties are also of great value for the lawn.

AMERICAN WHITE (AMERICANA)—A native tree of large size, with open spreading head, and graceful, drooping branches. Very popular in nearly all sections, and valuable for street planting. Succeeds admirably where the soil is somewhat heavy and damp. When fully grown, 30 to 40 feet.

ENGLISH (CAMPESTRIS)—A native of Europe, forming a tall, erect tree, with slender branches and small leaves. The branches project from the tree at almost right angles, making a very handsome appearance. When fully grown, 30 to 40 feet high.

SCOTCH (MONTANA)—A fine spreading tree, of rapid growth and large foliage. When fully grown, 30 to 40 feet high.

FRINGE (RHUS)—Hardy and adapted to almost any soil.

PURPLE FRINGE (COTINUS)—A small tree or shrub, very much admired on account of its peculiar fringe or hair-like flowers, covering the whole surface of the bush in midsummer. It grows 12 to 15 feet high, and should be allowed plenty of room to spread. Indispensable from its striking appearance. Also known as the Smoke Tree.

WHITE FRINGE (CHIONANTUS VIRGINICA)—A small native tree or shrub, of roundish form with large glossy leaves, and drooping racemes of pure white flowers, having narrow fringe-like petals. Blossoms in May and June. A superb lawn tree. When fully grown, 10 to 12 feet.

HORSE CHESTNUT (ÆSCULUS).

Very desirable for lawn or street, being a very beautiful, well-known tree, forming a round, compact head, with dark green foliage and an abundance of showy flowers early in spring. Hardy, healthy. When fully grown, 40 to 50 feet high.

LARCH (LARIX).

EUROPEAN (EUROPÆA)—A beautiful, rapid-growing tree, of irregular pyramidal form, with small, drooping branches. When fully grown, 30 to 40 feet high.

LINDEN (TILIA)—Very beautiful and desirable. The flowers yield a delicate perfume.

AMERICAN, OR BASSWOOD (AMERICANA)—A rapid growing, open-headed or spreading tree, with large leaves and fragrant flowers. Very desirable on account of its fine, luxuriant foliage. When fully grown, 40 to 50 feet.

EUROPEAN (EUROPÆA)—A very fine pyramidal tree with large leaves and fragrant flowers; smaller in all its parts than the preceding, and valuable for street or lawn planting. When fully grown, 30 to 50 feet.

MAGNOLIA—Very beautiful, but very difficult to transplant with success.

CUCUMBER TREE (ACUMINATA)—A magnificent tree, growing very rapidly, and often attaining from 60 to 90 feet in height, producing in June, yellow flowers tinted with bluish purple. Very desirable on account of its fine, luxuriant foliage, rapid growth and fine flowers.

SOULANGEANA (SOULANGES)—Showy white and purple flowers, cup shaped and three to five inches in diameter; foliage large and glossy.

SPECIOSA—Flowers a little smaller than Soulangeana; blooms a week later and remains long on the tree.

MAPLE (ACER)—Very valuable and highly ornamental. Vigorous growers; free from diseases; hardy and adapted to all soils. Beautiful in street or park. We name below a few of the best sorts.

ASH-LEAVED (NEGUNDO FRAXINIFOLIUM)—A rapid growing tree with leaves and branches of a light green. Very hardy.

NORWAY (PLATANOIDES)—A distinct foreign variety, now very popular here on account of its clean, broad foliage of rich, deep green. A stout, compact, vigorous grower of rounded form, very desirable and universally planted. When fully grown, 40 to 50 feet.

PURPLE LEAF NORWAY MAPLE—Broad leaf, holds its bright purple color through the season. Compact form, and while it is a slow grower on the start, this is not a disadvantage, but rather adds to its attractiveness for a fine lawn tree. The contrast between its purple leaf with that of the green leaf of other trees, makes it very desirable, even where the lawn is already pretty thickly planted. When fully grown, 30 to 40 feet.

SILVER LEAVED (DASYCARPUN)—A hardy, rapid growing native variety of the largest size; foliage bright green above and silvery underneath. When fully grown, 50 to 60 feet.

SUGAR, OR ROCK (SACCHARINUM)—A well-known native tree, valuable alike for its production of sugar and wood. Its stately form and rapid growth make it desirable as an ornamental shade tree. When fully grown, 50 to 60 feet.

WEIR'S CUT LEAVED (WEIRII LACINIATUM)—A Silver Maple with remarkable and beautiful dissected and abundant foliage, silvery underneath. The leaf stalks are long and tinted with red on the upper surface. Of rapid growth; shoots slender and drooping, giving it a very graceful appearance. While it makes a large tree if undisturbed, it will bear any amount of pruning, and may be easily adapted to small lawns. When fully grown, 50 feet.

MOUNTAIN ASH (SORBUS)—Very ornamental, especially when covered with their bright scarlet berries.

AMERICAN (AMERICANA)—A favorite, erect growing tree, of medium size, producing white flowers early in spring, followed by clusters of bright scarlet berries, which remain on the tree through the winter months.

EUROPEAN (AUCUPARIA)—Similar in appearance to the above, with finer foliage, and smaller, deeper colored berries. When fully grown, 20 to 35 feet.

OAK LEAVED (QUERCIFOLIA)—A very distinct and desirable tree, with compact pyramidal head and dark lobed leaves, downy underneath; producing the same flowers and berries as the preceding. Very hardy and desirable for planting on lawns or in door-yards. When fully grown, 20 to 25 feet.

MULBERRY.

DOWNING'S EVER BEARING—Very large, sweet, rich and desirable. When grown, 20 to 30 feet.

NEW AMERICAN—Fruit of the largest size; black; delicious in flavor. An attractive lawn tree, with very large leaves; of rapid growth; hardy. When grown, 20 to 30 feet.

PLUM—Profuse bloomers, and very hardy and desirable.

PRUNUS PESSARDI, OR PURPLE-LEAVED PLUM—A new ornamental recently imported from Persia; foliage a dark beautiful purple, clear and distinct and growing darker as the season advances; flowers white and small. The leaves remain until late in the fall; a decided contrast to other trees and shrubs and of great beauty and value for any lawn.

POPLAR (POPULUS)—Desirable where rapid growth is wanted.

CAROLINA—Of compact, pyramidal habit; a very rapid grower. A desirable tree for the seashore, and for our larger cities where escaping gas kills most shade trees. When fully grown, 50 to 60 feet.

LOMBARDY (FASTIGIATA)—Well known for its erect, rapid growth and commanding form; very desirable in large grounds or along roads to break the average height and forms of other trees. When fully grown, 50 to 75 feet.

SALISBUREA, or Maiden Hair Tree (ADIANTIFOLIA)

A remarkable tree from Japan, combining in its habit, characteristics of the Conifer and Deciduous tree. The tree is of medium size, rapid growth, with beautiful, fern-like foliage. Rare and elegant. Especially desirable for planting on lawns or in door yards.

SMOKE TREE—(See Fringe.)

TULIP TREE (*LIRIODENDRON TULIPIFERA*).—One of our largest native trees, with large, glossy leaves, shaped like a violin, and beautiful, tulip-like flowers. Very desirable for planting on lawns, or where trees are desired that will make a rapid growth. When fully grown, 50 feet.

THORN (*CRATÆGUS*).—Dense, low growing trees, and very ornamental when in bloom. Hardy, and adapted to all soils.

PAUL'S NEW DOUBLE (*COCCINEA FL. PL. PAULII*).—A new variety and desirable, producing bright crimson and very double flowers. One of the best.

DOUBLE WHITE (*ALBA PLENA*).—Flowers small; clear white and desirable.

WALNUT (*JUGLANS*).

BLACK WALNUT (*NIGRA*).—A native species of large size and majestic form; foliage beautiful, being composed of from thirteen to seventeen leaflets. Nut round.

ENGLISH WALNUT (*REGIA*).—A native of Persia. Nut oval.

DECIDUOUS WEEPING TREES.

Much attention is now given to this interesting class of trees, and for the benefit of those unacquainted with their habits, we would say that they should be divided into two separate classes, namely: Those which are grafted where the top or head commences to form, as in the case of the Kilmarnock Willow; and those having long, slender branches, which droop naturally, like the Cut-Leaved Birch. They first assume that conspicuous umbrella-like form so well-known, and so excellently adapted for planting in cemeteries, small yards and gardens. The latter have tall-growing trunks, with long, slender branches, and are really handsome. They are well adapted for larger places, where they can have sufficient room.

BIRCH (*BETULA*).

CUT LEAVED WEEPING (*LACINIATA PENDULA*).—One of the most desirable and beautiful trees for planting in door-yards or on lawns, having white or silvery bark, and branches of a graceful drooping habit, with leaves deeply cut and very fine. It makes a rapid growth and is perfectly hardy; full grown specimens standing in Minnesota, where the mercury drops to 40° below zero. When fully grown, 40 to 50 feet.

YOUNG'S WEEPING (*YOUNGH*).—Originated near Milford, England, where it was found trailing upon the ground. Grafted into stems of some height, it forms pendulous heads, drooping to the ground in fine, thread-like shoots.

ELM (ULMUS).

CAMPERDOWN (CAMPERDOWN PENDULA)—Grafted 6 to 9 feet high, this forms one of the most picturesque and handsome drooping trees. It is of rank growth, the shoots often making a zigzag growth, outward and downward of several feet in a single season. The leaves are dark green, glossy and large size, and cover the tree with a luxuriant mass of verdure. A rapid grower, the main growth being outward and downward. When fully grown, they reach a height of but 9 to 15 feet.

LINDEN—(TILIA).

WHITE LEAVED WEEPING (ALBA PENDULA)—A very beautiful tree, having large foliage, silvery-white underneath, and slender, drooping branches.

MOUNTAIN ASH (SORBUS).

WEeping (AUCUPARIA PENDULA)—The branches of this distinct variety are of a straggling, pendant character, turning and twisting in all directions. Covered during the autumn with bright red berries.

WILLOW (SALIX).

KILMARNOCK WEEPING (CAPREA PENDULA)—A distinct variety, having reddish shoots and large glossy foliage; grafted at a height of 5 to 8 feet from the ground, it makes a very desirable small lawn tree, having a perfect umbrella-shaped head, with the branches drooping gracefully to the ground; is well suited for planting in cemetery lots or other small enclosures. Requires little or no trimming. Hardy and of vigorous growth, thriving on all soils.

NEW AMERICAN WEEPING (AMERICANA PENDULA)—An American dwarf variety, which, when grafted on a standard stem, 5 or 6 feet high, makes one of the most ornamental of small weeping trees, having long, slender shoots and delicate leaves of great beauty and very graceful.

DECIDUOUS SHRUBS.

We confine ourselves to those having the greatest merit, and especially to such as possess some distinct qualities, either of foliage or of flower.

We have made selections especially adapted to the requirements of such persons as have small yards, which they wish to decorate with the best shrubbery for their purpose, and are fully confident that the following sorts, many of which are new, will be found so perfect in form and color of flower and foliage, and so complete in all other desirable qualities, that a selection from these sorts cannot fail to secure perfect satisfaction.

These are much smaller, and occupy less space than trees; are very valuable for grouping on the lawn, or planting as single specimens in the door-yard.

ALTHEA (or **ROSE OF SHARON**)—(*Hibiscus*.) Fine, hardy, free-growing and flowering shrubs of the easiest cultivation. Very desirable on account of blooming in August and September, when scarcely any other tree or shrub is in blossom. They attain a height of 6 to 10 feet.

DOUBLE BLUE,
DOUBLE WHITE,
DOUBLE PURPLE (*PURPUREA FL. PLENA*),
DOUBLE RED (*RUBRA FL. PLENA*).

} These varieties are distinguished by the color of the blossoms, each being the same in habit and foliage.

VARIEGATED LEAVED (*FLORA PLENA FOL. VAR.*)—A conspicuous variety, with leaves distinctly marked with light yellow, and having double purple flowers, showy and desirable.

BERBERRY (*BERBERRIS*).

PURPLE LEAVED (*PURPUREA*)—A very handsome shrub, growing from 3 to 5 feet high, with violet-purple leaves and fruit. Makes a fine ornamental hedge.

CALYCANTHUS, or **Sweet Scented Shrub**.—This is very desirable on account of the peculiarity and very pleasing fragrance of its wood. Its foliage is rich, and flowers of a rare chocolate color, with an agreeable odor. The *Calycanthus* blossoms in June and at intervals through the summer. When fully grown, 6 to 8 feet.

DEUTZIA.—The *Deutzias* are from Japan. Their hardihood, fine habit, luxuriant foliage and profusion of attractive flowers, place them among the most beautiful and among the most popular of our flowering shrubs. Their flowers are produced the latter part of June, in racemes 4 to 6 inches long.

GRACILIS (*SLENDER BRANCHED*)—A dwarf variety, covered with a profusion of white flowers in June. This is well adapted to planting in cemetery lots or small door-yards. Fine for pot culture, as it flowers freely in low temperature during the winter,

CRENATE LEAVED (*CRENATA*)—A new variety recently introduced. Similar in growth to the old "rough-leaved"; flowers very double, white, tinged with rose.

DOGWOOD VARIEGATED.

A rapid grower; most of the leaves are broadly margined with white, while a few are entirely white; producing white flowers in June. Very conspicuous and ornamental in winter, when the bark is blood red.

HONEYSUCKLE, UPRIGHT (*LONICERA*)—They are quite handsome and attain a size of 4 to 6 feet.

RED TARTARIAN (*TARTARCIA RUBRA*)—Beautiful flowering shrub, blossoming early in spring. Bright pink flowers.

WHITE TARTARIAN (*TARTARCIA ALBA*)—Similar to the above in growth, producing white flowers very abundantly.

HYDRANGEA.

LARGE PANICLE-FLOWERED (PANICULATA GRANDIFLORA)—A fine shrub, growing from 8 to 10 feet high; flowers, produced in great pyramidal panicles a foot long, are at first pure white, then changing to pink. Begins to bloom early in August, continuing several weeks. Lower branches can be trimmed off and grown in form of small tree, or should be thinned out in early spring. It is valuable for planting either singly or in beds. Pronounced "decidedly the finest flowering shrub of recent introduction."

OTAKSA—Foliage a beautiful deep green color. The plant produces immense trusses of rose-colored flowers in profusion in July; free bloomer. Requires protection in winter; should be grown in pots or boxes and wintered in the cellar, and in summer placed on stoop or along walks under the shade of trees.

LILAC (SYRINGA)—Well known and beautiful hardy shrubs; very ornamental in the spring, flowering in May.

PURPLE (VULGARIS)—A large, strong growing shrub, blooming early in the spring and bearing in profusion, large, purple, fragrant flowers.

WHITE (VULGARIS ALBA)—Similar, excepting flowers are white.

PÆONIA (HERBACEOUS)—Extremely hardy, and it may be truly said that they are as "*hardy as an oak*," and in the severest climates the plants require no other protection than that which they afford themselves. Of vigorous habits and healthy growth, which together with their freedom from disease and insects, are important arguments in favor of their cultivation. When once properly planted, about all the necessary work has then been done, and each succeeding year adds to their size and beauty. Their foliage is a rich, glossy, deep green, which renders the plant very ornamental, even when not flowering. In flower they produce large, handsome, regularly formed cup blossoms, something like our larger roses, and no other flower is as well adapted for large showy bouquets. They may be planted singly or in a bed or in borders.

We offer the following colors :

PINK,
RED,
SCARLET,
CRIMSON,
WHITE.

} These varieties are distinguished by the color of
the flower.
ORDER BY COLOR.

QUINCE, JAPAN (*CYDONIA JAPONICA*)—There are several flowering varieties differing only in their color. Although of straggling growth they can be pruned to desirable shapes without injury. Their large, brilliant blossoms appear early in the spring in great profusion. Foliage bright green and glossy all through the summer. It is sufficiently thorny and strong, to make valuable hedge, and its beautiful flowers make it very handsome for that purpose.

SMOKE TREE—(See Purple Fringe, under Ornamental Trees.)

SPIREA—Hardy; easily grown; of low growth, requiring but little room; blooming extends over a period of three months.

AUREA, OR GOLDEN SPIREA (*OPULIFOLIA AUREA*)—A striking variety of decided beauty, and one of the most effective shrubs for a lawn; foliage green, bordered with a rich, golden yellow; very distinct and beautiful; in June the branches are covered with a double white flower. Holds the color of its foliage through the entire season.

CALLOSA ALBA—A dwarf variety of the above, having pure white flowers in the greatest profusion. Very desirable on account of its dwarf habit and free flowering.

SNOWBALL (*VIBURNUM*).

COMMON SNOWBALL (*STERILIS*)—The well-known sort, and a general favorite on account of its large size and the large globular clusters of white flowers in June.

JAPAN SNOWBALL (*PLICATUM*)—A rare and exceedingly beautiful species from Japan; handsome plicated leaves; globular heads of pure white neutral flowers early in June. Surpassing the Common Snowball in many respects, as its habits is much better, foliage much handsomer, flowers whiter and more delicate.

SYRINGA, or Mock Orange (*PHILADELPHUS*)—Vigorous habits, very hardy, with large, handsome foliage. Beautiful white flowers, produced in the greatest profusion at the blossoming season. With the exception of the dwarf varieties, they form large sized shrubs 12 to 15 feet high; but of course can be kept smaller by proper pruning. Flowers in June after the Wiegela.

GOLD LEAF SYRINGA (*FOLIIS AUREIS*)—A handsomely shaped plant of medium size, with bright golden yellow foliage, retaining its color during the entire season. Will be found valuable for creating pleasing and striking contrasts with shrubs of other colored foliage.

TREE PÆONIES—Handsome flowering shrubs, attaining from 6 to 8 feet in height in about ten years, with proper care. The flowers appear in May, are of gorgeous colors, very numerous, and enormous in size, often measuring 6 to 9 inches across. Very effective amongst other shrubs, or for borders or margins. Although hardy, the plants are greatly improved by slight protection in winter.

CRIMSON,	}	Distinguished by the color of the flower, each being the same in habit and foliage.
RED.		
PINK.		

BANKSII—Very large, fragrant flower; rosy blush, with purple center.

WIEGELA—Hardy, easily grown, and great bloomers. Of erect growth while young, but gradually spreading and drooping as they acquire age. They produce in June and July, superb large trumpet-shaped flowers, of all shades and colors from pure white to red. In borders and groups of trees they are very effective, and for margin work the variegated-leaved varieties are admirably suited, their gay-colored foliage contrasting finely with the green of other shrubs.

HORTENSIS NIVEA—Flowers pure white, retaining their color, and being clear enough for the choicest bouquets; foliage large; a profuse bloomer; of dwarf spreading habit; 3 to 4 feet.

ROSEA—An elegant shrub, with fine rose-colored flowers. Introduced from China by Mr. Fortune, and considered one of the finest plants he has discovered. Quite hardy; of erect, compact growth. Blossoms in June.

VARIEGATED—Leaves bordered with yellowish white, finely marked; flowers rose-colored. Of upright growth.

CLIMBING AND TRAILING SHRUBS.

The climbing shrubs are useful to adorn and embellish the yard and grounds, and to hide whatever may be unsightly, and when trained over verandas, arbors and trellises, they, or so many of them as can be well located, cannot fail to challenge admiration by the beauty of their foliage. When planted near a foundation wall, the ground should be kept frequently loosened, as in such position the surface of the ground is very apt to be baked quite hard. Of course a mulch, in this position is also very desirable.

AMPELOPSIS.

VEITCH'S (VEITCHII)—From Japan. It is of a neat character, has a profusion of glossy green foliage, shaded with purple, changing to brilliant red in the autumn. The leaves are smaller than those of the American Ivy and overlap one another, forming a dense sheet of green. It clings tightly to even the smoothest surface, and is unsurpassed as a basket or vase plant. One of the finest climbers. Also known as Japan Ivy. Should properly have protection the first winter, but after it becomes once established, is perfectly hardy and grows rapidly. Holds its leaves until January.

For covering walls, stumps of trees, rockeries, &c., and for the ornamentation of brick and stone buildings, it can be specially recommended. It does not require supporting, being a self-clinger strictly.

CLEMATIS—Although of recent introduction, the finer varieties of Clematis are to-day pre-eminently the most showy and effective of all the hardy flowering climbing vines known, so far as richness of color and elegance of form of the flower is concerned. Nothing can excel the surpassing beauty of the many colors of the several varieties. They are peculiarly adapted for covering pillars, trellises, walls, fences, rocks, &c. Their exceedingly rapid growth (making from ten to twelve feet of vine in a single season), rendering them especially valuable for hiding from view any unsightly object. They are equally efficient when used as a bedding plant, covering a bed very quickly if pegged down occasionally. All of the varieties offered by us are entirely hardy, most of them are lavish bloomers, and the majority blossom in first season after transplanting.

We divide the clematis into two classes.

CLASS A—The old wood should be trimmed out in the fall, trimming to within 9 to 12 inches of the ground; they flower the following year on the new growth of wood.

CLASS B—Should be trimmed in the summer, after flowering and will the same season again flower from the new wood, and they should not be trimmed again until the following summer.

COCCINEA—An American variety and unlike any other Clematis. The vines attain the height of from 8 to 12 feet, beginning to flower in June, and continuing until frost. The flowers are bell-shaped; in color, a rich, deep coral scarlet, and lasting a long time when cut. Early summer bloomer. Prune in the fall. Class A.

FLAMMULA (EUROPEAN SWEET)—Though the flowers of this variety are individually small, they are very abundant in the late summer and autumn months. They are highly prized for their perfume, which resembles that of the Hawthorn, but is much sweeter. Prune in the summer. Class B.

HENRYII—Of robust habit and a very fine bloomer. Flowers large, of a beautiful creamy white, consisting generally of from six to eight spreading sepals. Is a remarkable free and continuous bloomer, beginning with the earliest and holding on with the latest. One of the finest white varieties. June to October. Prune in the summer. Class B.

JACKMANII—This variety bears a profusion of large sized, intense violet-purple flowers, six inches across, richly veined and shaded with reddish purple. It is a rapid grower; an early and abundant bloomer; perfectly hardy and adapted to all kinds of culture; it is equally fine either as a climbing or trailing plant, and is well adapted for covering up all unsightly objects. Planted out in a border or flower bed, it will produce the finest effect and give a continuous bloom through a long season, year after year. Prune in the fall. Class A.

LORD NEVILLE—Rich dark plum colored, large, well formed flowers; edges of sepals finely crimped. A distinct variety; strong bloomer. Prune in the summer. Class B.

MRS. GEORGE JACKMANII—An English variety; color white; flowers single, large, some being six inches in diameter; strong grower; hardy. Prune in the summer. Class B.

RAMONA—A new American seedling, originated in Newark, New York. A very strong, rampant grower; very hardy and a perpetual bloomer. The color of the flower is a very deep sky blue, very distinct and attractive; flowers very large in size, many running as large as eighteen inches in circumference. Peter Henderson says:—"It has the largest and most attractive flowers of any Clematis I have ever seen." Prune in the summer. Class B.

WHITE PERPETUAL—Where a white flowering variety is wanted and the customer prefers to have us select the variety best adapted to their section, the order can be given under this name.

HONEYSUCKLE (LONICERA)—This includes some of the most desirable climbing plants that can be used for covering arbors and porches.

HALL'S NEW JAPAN HONEYSUCKLE (HALLENA)—An almost ever-green variety, with pure white flowers, changing to yellow; very fragrant and a vigorous grower. Covered with flowers from July to December.

MONTHLY FRAGRANT (BELGICUM)—Flowers red and pale yellow; sweet scented; blooms through the summer.

SCARLET TRUMPET MONTHLY (SEMPÆRVIRENS)—Flowers deep red, trumpet-shaped; flowers all summer. A native climber, and appropriate for trellises and rock work.

IVY (HEDERA)—The evergreen sorts often suffer in winter, if exposed to the sun, and should be planted on the north side of the building.

ENGLISH OR IRISH—Old, well known sorts, used in covering the north side of buildings; leaves deep green.

VARIEGATED (ROMBERA, VARIEGATA)—Leaves small and pretty; variegated.

WISTARIA.

CHINESE PURPLE (CHINENSIS PURPUREA)—One of the most elegant climbing vines known, and a very rapid grower after it gets thoroughly established, sometimes making twenty feet of wood in a single season. Bears long clusters of pale blue flowers in May and June, and also in September. Extremely hardy. Attains a larger size than any other climber.

CHINESE WHITE (CHINENSIS ALBA)—Differs from the above only in its color of flowers, which in this are smaller and pure white, forming a striking contrast.

EVERGREEN TREES.

Evergreens are difficult to transplant, and both the time and manner of transplanting should be looked to. They should never be set in the Fall, except in the South. In setting evergreens, great care must be taken to avoid all exposure to sun or winds. It is advisable to prepare the places for setting, (or if a hedge, the strip where the hedge is to stand,) before the evergreens are unpacked or brought into the sun. If preparations have not been made when evergreens are received by the purchaser, the plants should be heeled in, in some sheltered spot in the garden, or put in the cellar, and the preparations for properly setting made as soon as possible. It will not do in setting a hedge to strew the plants along the line where the hedge is to stand, as is often done, for this exposure to wind and sun is almost fatal; but few plants at a time should be carried into the sun, and these properly set as fast as possible.

ARBOR VITÆ (THUJA).

AMERICAN (OCCIDENTALIS)—A well known native variety, commonly known as the WHITE CEDAR; it forms an upright, conical tree of only medium size, and is one of the finest evergreens for screens, being hardy. It grows rapidly, and by easy management it soon forms a most beautiful hedge, very dense and perfectly impervious to the sight. It is not adapted to turn stock, but forms a most desirable and ornamental screen to divide the lawn from other parts of the ground, or for similar purpose. It is often planted individually in the lawn. For hedge purposes, only small sized plants should be used.

JUNIPER (JUNIPERUS).

IRISH (HIBERNICA)—A very pretty tree or shrub, forming a neat, tapering column of deep green foliage; very hardy, and desirable for planting on lawns or in cemetery lots, where larger evergreens are not admissible.

PINE (PINUS).

AUSTRIAN, OR BLACK (AUSTRIACA)—From Central Europe, where it grows over 100 feet high; remarkably robust, with long, stiff leaves and deep green foliage; hardy everywhere. Valuable for planting as wind-breaks, screens, etc.

SPRUCE (ABIES).

NORWAY (EXCELSA)—Of very rapid growth, and gracefully drooping habit when of some size, dense in structure, regular in outline, and perfectly hardy; will bear shearing or cutting well, and hence is well adapted for planting in hedges or screens. Holds its green color through the entire year.

EVERGREEN SHRUBS.

AZALEAS.

The Ghent hybrid varieties which we offer, combine nearly all colors and possess a delightful perfume. They rank next to the Rhododendron for the decoration of lawns and pleasure grounds. The blooming season continues during the months of May and June. Are improved by slight protection in this northern latitude.

RHODODENDRON—The Rhododendron has been well known in America among a few for half a century, but to many it is comparatively unknown.

For their success a light garden soil is the best; if the soil is clay, let it be lightened with sand, leaf mold, rotted sod or surface soil which has been heavily manured the year before, are all beneficial; mulching is useful, but it should not be allowed to remain during the growing season from April 15th to July 15th, as the soil needs air and sun for at least three months of the year. Some liquid or surface manure can be profitably applied during the growth, and as they are heavy feeders they should not be planted too close, for they need abundant room for their roots, when properly supplied with liquid or surface manure. It is a great mistake to plant them under trees, as they will not flower as freely as when planted in the sun.

The broad evergreen leaf with its glossy richness, would alone entitle it to the first rank, but when this is crowned in June with many clusters of flowers, each cluster large enough for a ladies bouquet, and each variety having its own color, *white, purple, pink, red and crimson*, the term *superb* describes its appearance. It can be planted singly upon the lawn, or in a city garden, and is also very effective in a mass of one or two dozen. We can supply the above colors; (ORDER BY COLOR).

HEDGE PLANTS.

Hedges are valuable as a defence against animals, as wind-breaks to protect orchards, gardens or farms unduly exposed, and as ornamental fences or screens to mark the boundaries of a lawn or cemetery lot.

HEDGES FOR DEFENCE.

HONEY LOCUST—For turning cattle, and as a farm hedge, **Honey Locust** is much the best. It is of vigorous growth, perfectly hardy; thrives with ordinary care, and is sufficiently thorny to be impenetrable. It bears the shears well. Plant 9 to 12 inches apart, or a very dense hedge for defense or ornament can be made by planting in two rows, about 9 inches apart, and setting the plants in the rows alternately.

HEDGES FOR WIND BREAKS.

The **Norway Spruce** is best. Its vigorous habit, rapid, dense growth when properly sheared or pruned, large size and entire hardiness, are characteristics not easily obtained in any other Evergreen.

The **American Arbor Vitæ** comes next. Belts of **Pines** are also useful as a protection.

ORNAMENTAL HEDGES or SCREENS.

American Arbor Vitæ, Norway Spruce, Japan Quince and Purple Berberry, all described in their appropriate places in this catalogue, make beautiful screens or hedges.

ROSES.

Our list embraces the most beautiful and desirable hardy varieties of Roses in cultivation, comprising all the different colors, and covering a blooming interval from the middle of June until October.

Our hardy Roses are strong plants grown out of doors, well rooted and every way desirable. They have usually bloomed before being sent out, and are in every respect much better and stronger plants than the ones that are so freely advertised and sent out by mail, which are small, tender shoots, started in a greenhouse, and after a few weeks, sent out before they have established growth and constitution enough to stand the shock of transplanting; and while for plants of this older age, grown in this way, we have to charge a higher price, they are more than worth the difference, and will give customers much better satisfaction in the end than the cheaper plants.

We usually send out plants 12 to 24 inches in height, strong and well rooted, but customers should bear in mind that different varieties have different habits of growth, and while some kinds are clean, handsome and symmetrical when delivered, other sorts, although equally as good, may be rough and straggling while young, and perhaps not as large in size.

In our list the term (H. P.) denotes the hardy and popular class called Hybrid Perpetuals. They usually bloom profusely during June, and occasionally during the summer and autumn. All suitable for the garden or lawn.

The tender list, marked (T.), includes a variety of classes which should not be exposed during the winter. They are profuse bloomers.

The Climbing Roses are hardy and should be planted out doors. They bloom profusely during June, and some kinds during the summer. Valuable for trellises, porches, etc.

The Mosses are very hardy and fragrant. June bloomers, although some kinds bloom during the summer. The buds have a mossy covering on the outer leaves, and are very beautiful.

WE GROW ROSES IN TWO WAYS, viz: On their own roots from cuttings, and budded low on the Manetti. Most of the tender and climbing sorts are grown from cuttings; the Hybrid Perpetuals, Mosses and Summer Roses, are grown in both ways. The Manetti stock was originally obtained many years ago from Como, Italy. We find many varieties of Roses grown on this stock adapt themselves to a greater range of climate and soil, bloom more profusely, endure better the heat of summer, and make far stronger plants than if grown on their own roots. Many object to budded roses on account of the suckers they sometimes throw out; but if proper attention is paid to the planting, this will rarely be an annoyance.

Budded Roses should be planted sufficiently deep, so that the junction of the bud with the stock, is from two to three inches below the surface of the earth. WE CANNOT TOO FORCIBLY DIRECT ATTENTION TO THE ABOVE RULE.

There are many varieties in cultivation, and we might extend our list almost indefinitely, but knowing the importance of healthy robust habit, hardiness and freedom in blooming, combined with beauty of flower, we propagate varieties possessing these points, and can recommend them for general planting.

Agrippina [T.]—Dark brilliant crimson; flower of good shape; a good grower and constant bloomer. Fine for bedding out during summer.

Aimee Vibert [T.]—Pure white; blossoms in clusters.

Alfred Colomb [H. P.]—Brilliant carmine crimson; very large, full, of fine globular form. Extremely fragrant, and in all respects a fine sort. One of the best, for general cultivation.

Anna de Diesbach [H. P.]—Carmine; a beautiful shade. Very large and double. A fine garden sort. Very fragrant. One of the hardiest.

Baltimore Belle [CLIMBING]—White, with blush center; full, double and compact; one of the most rapid in growth, with hardy and luxuriant foliage, and immense clusters of flowers.

Blanche Moreau [M.]—Pure white, large, full and of perfect form. The buds and flowers produced in clusters, and freely furnished with deep green moss.

Baron de Bonstetten [H. P.]—Rich, velvety maroon; large, full.

Capt. John Ingram [M.]—Purplish crimson, full and fine.

Caroline de Sansal [H. P.]—Pale flesh color, turning to blush; large size and full; flat, often irregular in form; generally the best in autumn; vigorous grower.

Climbing Jules Margottin [C.]—Carmine rose, lightened with pink; large, full flowers; very pretty in bud or in open flower. This is a decided acquisition; the flowers are the same as in the old variety, and quite as freely produced; the growth is more vigorous. It may be grown as a pillar rose, or by pruning, kept in bush form.

Climbing Victor Verdier [C.]—Brilliant rosy carmine, edged with purple. Very large, full and fragrant. Very vigorous and hardy.

Coquette des Alps [H. P.]—White, center slightly shaded with carmine; flowers large and finely formed; a vigorous grower and profuse bloomer.

Countess of Murianis [M.]—A fine large, white variety, tinged with flesh; beautifully mossed. Is perfectly hardy, and a free grower.

Crested Moss [M.]—Deep pink colored buds, surrounded with a mossy fringe and crest. Free from mildew. Fragrant.

Fisher Holmes [H. P.]—Deep, glowing crimson; large, moderately full and of fine imbricated form. A superb rose.

Gem of Prairies [C.]—Rosy crimson, or rich carmine; blooms in clusters and is fragrant. A strong and vigorous grower, and a great acquisition to this class of Hardy Climbing Roses.

General Jacqueminot [H. P.]—Brilliant crimson scarlet; very showy; free bloomer and popular.

General Washington [H. P.]—Brilliant rosy carmine; large and double, and flat form; vigorous grower and free bloomer.

General Tartas [T.]—Buff rose; of special value for the buds.

Gracillis [M.]—Deep pink buds, surrounded with delicate, fringe-like moss. Very beautiful.

Harrison's Yellow [HARDY]—Deep golden yellow; medium size, semi-double; blooms freely in June. The finest hardy yellow rose.

Tree Roses—These can be furnished in LIGHT COLOR or DARK COLOR. Difficult to transplant, and are never a handsome plant when delivered to the customer, although if they succeed, they are very striking and beautiful on the lawn. (ORDER BY COLOR.)

Directions for Transplanting Trees and Shrubs.

PREPARATION OF THE SOIL.—For Fruit Trees the soil should be dry and in good condition, thoroughly plowed, and so prepared as to be fit for the production of a good crop of corn or wheat. If naturally moist, it should be thoroughly drained, and if exhausted by cropping, carefully dressed, as trees will not thrive on weak soils, or on such as are saturated with stagnant moisture.

PREPARATION OF THE TREES.—Do not let them get dry. If not ready to plant when the stock arrives, the best way is to "heel in" by placing the roots in a trench and covering them thoroughly with mellow earth well packed about them.

We use the greatest care in digging and packing, but the loss of some small roots and fibers is unavoidable, and to preserve the natural balance between roots and top, a proper and judicious pruning is in most cases absolutely necessary. All broken or bruised roots should be cut off with a sharp knife, as a smooth cut heals much sooner than a bruise. The tops of Fruit Trees should be cut back to the extent of one-half the growth of the previous season, taking care to prune it in such a manner as to secure a head properly shaped and sufficiently open to the sun and air. Evergreen and other Ornamental trees, the beauty of which depends on preserving their natural form, should be pruned but little.

PLANTING.—The hole should be dug deep and large enough to receive the roots of the tree without cramping or bending.

Set the trees firm as a post. Remember that the roots grow in firm sub-soil, and the object is to get the roots back into as near the same natural position as possible. After filling the hole nearly full, press the earth down firmly, finish by filling in to a little above the level surface with the loose earth. When the earth settles about the tree it should stand fully as deep as when in the nursery, it being better to plant an inch or two deeper than not deep enough. When set in autumn, it is well to raise a mound of earth about the tree a foot or more in height. This will keep them from being swayed by the winds or thrown out by the frost during the winter. It should be removed in the spring. In planting dwarf trees, the stock on which they are budded, and no more, should be under ground. They will then stand firmly and not lose their dwarf character by the rooting of the standard stock.

STAKING.—It is well in the case of tall trees that have been firmly set and that are liable to be swayed and loosened by the wind, to support by driving a stake each side and far enough from the tree so as not to injure the roots, and tying the tree between with bands of some soft material.

MULCHING.—This is properly done by placing a layer of course manure or litter from three to six inches deep about the tree, extending one or two feet farther in each direction than the roots. Do not, however, place the mulch close against the tree, but rather leave a space of two or three inches clear, for the heating manure is apt to hold so much moisture that it will rot the bark if piled too close. The mulch keeps the ground moist and of an even temperature, renders watering unnecessary, and in all respects is preferable to watering.

CULTIVATION AFTER PLANTING.—

Those who are obliged to plant trees in fields of grain or grass, should see that all such are carefully mulched with coarse manure, and that the ground is kept loose and moist about the tree. A hoed crop is preferable in such plantation for the first five years. After this time, Standard Apple, Pear, Cherry and Plum trees will grow and produce fairly in turf, but will give better results to continue the growing of such crops with them as require manure and cultivation for several years longer. The Dwarf Trees and peaches should be mulched every year with coarse manure, and the ground thoroughly cultivated.

PRUNING.—Trees should be trimmed as early as possible up to the height it is intended the future head should be, that the cutting off of large limbs may not in the future be necessary. After the removal of the lower branches, till the head has reached the desired height, the only pruning needed is to remove such branches as are crossing or interfering with each other, and to keep the head in symmetrical shape and open to the sun and air. The branches of the Dwarf trees should be thinned out and the new growth cut back each spring to form a symmetrical cone-shaped head. Pruning after

the first year should be varied according to the purpose of the planter, and the variety of the trees.

HEDGING.—In the strip intended for planting, work the soil thoroughly for a distance of three or four feet wide, and on sodded ground always remove the sod. In the case of evergreens,

dig a trench wide and deep enough to receive the roots without cramping, and always set as deep as when growing in the Nursery. In filling, tread the soil down firmly, and cover the top with a suitable mulch to retain the moisture, or if convenient, leave off the mulch and cultivate often with hoe or cultivator.

Wintering Stock Procured in the Fall.

In sections where the winters are very severe, it is not advisable to set out young trees and plants in the fall, but the practice of procuring them in the fall, covering them with earth during the winter and planting them in the spring, is becoming more and more popular.

Select a spot where no water will stand during the winter, having no grass near to invite mice, and a sheltered spot if possible. Dig a trench deep enough to admit one layer of roots, and sloping enough to permit the trees to lie at an angle of not more than thirty degrees with the ground. Having placed one layer of roots in this trench, cover them with mellow earth, extending well up on the bodies, and see that this is firmly packed. Then add another layer of trees overlapping the first, and continue as at first until all are heeled in. As soon as this is done, cover the tops so well with evergreen boughs that they will be thoroughly protected from winds.

We take pains to place every item in the hands of our customers in the best possible condition, and in order to furnish some precautions which our experience suggests, we give these few hints on such points as are essential for general cases. In case further instructions are desired on any points, please write us with particulars, as we are pleased to hear from our customers, being interested in the success of every article we send out.

ESTIMATE TABLE.

Suitable Distance of Trees, Etc., in Plantations.

APPLES—Standard,	30 feet apart, each way.		
APRICOTS.....	16 to 18	"	"
BLACKBERRIES, 2 ft. in row, 6 ft. between rows.			
CHERRIES—Sweet.....	18 to 20	"	"
" Sour	16 to 18	"	"
CURRANTS.....	3 to 4	"	"
GOOSEBERRIES.....	3 to 4	"	"
NECTARINES.....	16 to 18	"	"
PEARS—Standard.....	20 to 25	"	"
" Dwarf.....	10 to 12	"	"
PLUMS.....	14 to 16	"	"
PEACHES	16 to 18	"	"
QUINCES.....	10 to 12	"	"
RASPBERRIES	3 to 4	"	"

Number Required for an Acre.

At 4 feet apart, each way.....	2,729
At 5 " "	1,745
At 6 " "	1,200
At 8 " "	680
At 10 " "	430
At 12 " "	325
At 15 " "	200
At 18 " "	135
At 20 " "	110
At 25 " "	70
At 30 " "	50

To estimate the number of plants required for an acre, at any given distance, multiply the distance between the rows by the distance between the plants, which will give the number of square feet allotted to each plant, and divide the number of square feet in an acre (43,560) by this number. The quotient will be the number of plants required.

INSECTS. DISEASES. REMEDIES.

Brief descriptions of various insects and diseases ; also the best known remedies.

Smaller or larger quantities of any remedy than those we give, can of course be prepared, care being taken, however, to retain just the proportions given.

To prepare KEROSENE EMULSION.

Common Bar Soap 2 lbs., Water 1 gal., Kerosene 2 gals.

Shave the soap into the water, then heat the water until all the soap is dissolved ; add this soap liquid boiling hot to the kerosene, and mix thoroughly ; this may be done by taking a force pump and putting the hose back into the mixture again. When cool the emulsion should have the consistency of thick cream, and should adhere without oiliness to the surface of glass.

To prepare BORDEAUX MIXTURE.

Sulphate of copper 8 lbs., dissolved in 4 or 5 gals. hot water, allowing it to cool.

In another vessel, Best quicklime 8 lbs., slacked in 6 or 8 gals. of water, allowing it to cool.

When both have cooled to the temperature of the air, pour the lime slowly through a strainer into the Copper solution, mixing them thoroughly by constant stirring.

When ready to use, the mixture should be diluted by adding water to make it up to 22 gals. in all. Keep it thoroughly mixed while using.

To prepare AMMONIACAL SOLUTION OF COPPER CARBONATE.

Carbonate of Copper 3 oz., Pulverized Carbonate of Ammonia 1 lb.

Mix thoroughly together, and then dissolve the mixture in 2 qts. hot water.

When ready to use, the mixture should be diluted by adding water to make it up to 50 gals. in all.

Ammonium carbonate can be bought in large quantities for about nine cents per lb., and copper carbonate for about thirty cents per lb.

APPLE.

CODDLING MOTH.

This little white caterpillar is the larvæ of a small, nocturnal, gray moth ; the moth deposits her eggs on the blossom end of the fruit ; as soon as the eggs hatch, the larvæ eats its way into the young fruit.

REMEDY.--Paris Green, or London Purple 1 lb., water 250 gals., Lime 1 1-2 lbs, Mix thoroughly.

Spray the trees with this mixture, first when the blossoms are falling, and again when the fruit is of the size of peas.

CANKER WORM.

This "measure worm" eats the green portion of the leaf, giving the tree a brownish color as though scorched by fire. The worms appear in early spring, and when full grown are an inch long.

REMEDY.--Paris Green or London Purple 1 lb., Water 200 gals., lime 1 1-2 lbs. *Mix thoroughly.*

Spray the trees with this mixture when the leaves are one-third grown; usually one spraying will be sufficient, but if the worms appear to be on the increase, a second application will be advisable.

TENT CATERPILLAR.

The large silken nests made by this insect are familiar to everyone. The Caterpillars appear in May or June, and in five or six weeks have reached their full size.

REMEDY.--Run a limber pole into the web or nest, when the worms are in it, and by twisting the pole the web or nest can be easily detached, and when brought to the ground, stepping on it will destroy the occupants.

APHIS.

Often attack the tree early in the season. The Aphis (or lice) are quite small and are green color; by sucking the juices from the young growth they greatly interfere with its functions, resulting in the tree having a sickly yellow appearance.

REMEDY.--Kerosene Emulsion 1 gal., water 20 gals. *Mix thoroughly.*

Spray soon as the Aphis appears; repeat the treatment in eight or ten days if necessary.

SCAB.

This fungus occurs on the leaves, fruit and young shoots. It is only where it attacks the fruit, however, that it becomes a serious pest. Here it manifests itself in the form of small, greenish brown, more or less rounded spots. These often appear when the apple is no larger than a pea, growing as the apple grows, and through its action rendering the latter one sided, knarled and utterly unfit for use.

REMEDY.--Ammoniacal Solution of Copper Carbonate.
[See formula in first part of Insects, Diseases, Remedies.]

Spray first, when the fruit is about the size of peas, and thereafter at intervals of 12 to 15 days until five or six applications have been made.

PEAR.

SLUG.

This insect attacks the leaves, eating away the green portion, so that nothing remains but the parchment-like tissue and the veins. It appears usually the latter part of June, and again in August.

REMEDY.--Lime 2 lbs., Water 20 gals. *Mix thoroughly.*

Spray the trees first as soon as the slugs are noticed. If necessary, repeat in a week or ten days.

By adding just a little Paris Green or London Purple, say 1 oz., the solution will be made more effectual.

Dusting the whole tree with dry air slacked lime is also effectual.

FIRE BLIGHT.

It is understood by the best authorities, both practical and scientific, that the cause of the disease is absolutely unknown, and that there is but one certain **REMEDY**, namely, to cut out and burn the blighted parts promptly on appearance of the disease.

Fortunately, pear blight seldom visits us oftener than once in twenty years, and in orchards where the knife and saw has been used promptly on its appearance, but trifling damage has resulted.

SCAB.

This is a form of the same fungus that attacks the apple, making the Apple Scab.

REMEDY.--(See Scab Remedy, under Apple.)

CHERRY.

APHIS.

Same as the Black Aphis, which affects the Peach.

REMEDY.--(See Black Aphis remedy, under Peach.)

SLUG.

Same as Pear Slug.

REMEDY.--(See Slug remedy, under Pear.)

CURCULIO.

Same as affects Plum fruit.

REMEDY.--(See Curculio remedy, under Plum.)

BLACK KNOT.

Same form of fungus which causes Black Knot on the Plum.

REMEDY.--(See Black Knot remedy, under Plum.)

PLUM.

CURCULIO.

This little grub originates from eggs deposited by a small, dirty gray beetle, when the fruit is still small.

REMEDY.--Where the curculio becomes too numerous this insect can be destroyed by spraying the trees with Paris Green, or London Purple, or by the jarring process. This spraying can be done to the best advantage by using a force pump, and the proportion should be: **Paris Green, or London Purple, 1 lb., Water 200 gals.,** applied immediately after the fruit has set, and again in about a week. Plum trees properly cared for are tremendous producers, and it is best to have a portion of the fruit removed from the trees by thinning out by hand.

Where it is thought best to destroy the curculio by jarring the trees it can be done best as follows: Lay canvass or sheets under the trees; place a thick pad of cloth against the tree to prevent bark from being injured, and strike on this pad with a mallet sufficiently heavy to give the tree a sudden jar. This jarring process should be repeated for several days just after the fruit has formed, and until you find few insects.

We think the spraying process will be found effectual, and is certainly easier, as it is not necessary to do this but two or three times.

APHIS.

Same as the one occurring on the Peach.

REMEDY.--(See Aphis remedy, under Peach.)

BLACK KNOT.

This is a disease caused by a fungus.

REMEDY.--Just as soon as the Black Knot appears, **cut it out**, removing the branch at least two inches below where the knot appears, and **burn the effected parts that you have cut out**, for if left on the ground the spores will mature and spread the disease.

Follow this method promptly and thoroughly, and you can exterminate the disease before it has done serious damage.

PEACH.

THE BLACK APHIS

Numbers of this small, shiny, black insect may be seen in the spring on the leaves and twigs of the peach. The lice often do a great deal of damage above ground as well as below on the roots.

REMEDY.--(*For the form above the ground.*) **Kerosene Emulsion** [see formula in first part of Insects, Diseases, Remedies,] **1 gal., Water 35 gals.**

The first spraying should be made as soon as the lice appear; if necessary this should be followed by others at intervals of a few days, until the trees are rid of the pest.

Under the ground the lice are best destroyed by **digging in tobacco stems or dust** among the trees.

The tobacco is scattered on the ground to the depth of half an inch or more, then dug in with a spade or fork.

PEACH YELLOWS.

This is one of the few diseases of which very little is positively known, except its effects. It usually makes its appearance about mid-summer, causing the foliage of the tree to turn yellow, and soon thereafter the body and larger limbs will throw out a considerable number of weak, yellow-leaved suckers. If the tree is loaded with fruit it will be under size, little or no flavor, and ripen prematurely.

REMEDY.--The moment that you feel *sure* that a tree is affected with yellows, **dig it up root and branch and burn it**, and plant any tree that you like, *other than a peach*, in its place.

It is very important to the planter to procure trees for orchard purposes entirely free from disease, and in an active experience of over thirty years we have never seen any yellows in our peach blocks.

GRAPE.

FLEE BEETLE.

This small, steel-blue insect appears in early spring, and at once begins eating the tender foliage. After eating about a month the female beetle deposits small, yellow eggs on the foliage. These soon hatch into small larvæ, which continue the work of destruction.

REMEDY.--Paris Green or London Purple 1 lb., Lime 1 1-2 lbs., Water 200 gals. *Mix thoroughly.*

Spray with this mixture as soon as the beetles are noticed. Two applications, at intervals of a week or ten days, will usually destroy all these insects.

BLACK ROT.

This disease attacks the leaves, young shoots and berries. It usually shows on the leaves first, forming reddish, more or less circular spots, which upon close examination are seen to have scattered over the surface little black dots, no larger than the point of a pin. The spots on the leaves usually appear 10 or 12 days before the berries are attacked, thus affording due warning which should not be allowed to pass unnoticed.

REMEDY.--When possible **remove and burn all infested wood and berries.** About the time the leaves are one-third grown, apply the **Bordeaux Mixture**. [See formula in first part of Insects, Diseases, Remedies.]

Repeat the application when the vines are in full bloom, and thereafter at intervals of 12 to 15 days, till the berries begin to ripen.

DOWNY MILDEW--BROWN AND GRAY ROT.

This fungus attacks the leaves, young shoots, flowers and fruit. On the leaves it usually manifests itself in the form of greenish-yellow or brownish spots on the upper surface, while on the lower side corresponding parts are covered with a white frost-like growth. As the disease progresses the frost-like patches may disappear, leaving only the brown leaf, which soon dries up and falls off. This fungus causes the brown and gray rot on the berries.

The brown rot does not usually make its appearance till the berries are nearly grown. At this time a brownish purple spot will appear on one side of the berry, and in a short time the whole fruit is involved, turning brown, and ultimately becoming soft and wrinkled.

In grey rot the fruit is covered with the same frost-like growth, seen on the stems and the under surface of the leaves; the berries are literally plastered together with the fungus, the effect being so peculiar and so different from any other disease no one will fail to recognize it.

REMEDY.--The same remedy as given for Black Rot in Grapes is the most effectual; it being very important that the spraying be done early, as the remedy does not kill the fungus already established on the vine, but prevents its spreading.

CURRANT.

CURRANT WORM.

The perfect form of the worm is a small fly, which lays its eggs on the leaves in early spring. As soon as the eggs hatch, the worms eat circular holes in the foliage and as the worms increase in size they become more voracious, often stripping the plant of its entire foliage.

REMEDY.--A half teaspoonful of Paris Green or London Purple to a pail of water, (*and it should be thoroughly stirred*) will prove an effective remedy against the currant worm. An old sprinkling pot or a whisk broom is as convenient a way of applying as any. In most cases one application, if early in the season, is sufficient.

CAUTION—Great care should be exercised in handling the Paris Green or London Purple, to prevent its getting on the clothing, and also if plants are in the garden, to keep children away from the fruit for a time.

If it becomes necessary to treat the bushes when fruit is near ripening, then use white hellebore, dusting it on the bushes when the dew is on them.

APHIS.

Attacks the leaves causing them to curl and turn brown. Are usually abundant in early summer, but as hot weather advances they disappear.

REMEDY.--Kerosene Emulsion 1 gal., Water 20 gal. *Mix thoroughly.*

Spray the plants as soon as Aphis, (or Lice) are noticed.

GOOSEBERRY.

CURRANT WORM.

Same as attacks the Currant Bush.

REMEDY.--(See Currant Worm Remedy under Currants.)

MILDEW.

This fungus attacks the leaves, young shoots and berries appearing as irregular patches and blotches, of a grayish white color.

REMEDY.--Potassium Sulphide (or Liver of Sulphur) 1-2 oz., dissolved in 1 gal. Water.

Begin spraying as soon as the young leaves unfold and continue the spraying at intervals of from eighteen to twenty days. If frequent rains, it will be necessary to spray oftener.

(Potassium Sulphide should be bought for 20 cents per lb.)

ROSE

If proper attention is paid to soil, planting, watering, &c., and a few simple directions heeded, you will not often be greatly troubled.

APHIS.

One of the most annoying foes and particularly infests plants in the house; healthy plants in the garden are but little liable to their attacks.

REMEDY.--The Vapor of Tobacco is not only very effective in destroying insects where it can be confined, as in green-houses, but it is less injurious to delicate plants than either the smoke or the liquid.

Instead of fumigating green-houses, it is customary now to strew the ground under the plants with tobacco stems, which being moistened with the syringing, creates a vapor, which is destructive to insect life.

Where it is not convenient to use this remedy, as in dwelling houses, we recommend

Quassia Chips 4 oz., boil in **1 gal. soft Water** for ten minutes; strain off the chips and to the liquid, add **Soft Soap 4 oz.,** which should be dissolved in the liquid as it is cooling. *Mix thoroughly before using.*

It may be applied with a clean painters brush, of moderate or small size, brushing every leaf or shoot that is infested. After fifteen or twenty minutes have elapsed, the plants should be washed or syringed with pure water.

Another good remedy is the same as above only **Tobacco Stems 1-4 lb.,** are used instead of Quassia.

ROSE CATERPILLAR.

In the month of May, or as soon as the leaves have pushed forth, the Rose Caterpillar makes its appearance; he can readily be detected, for he glues a leaf or two together to form his shelter.

REMEDY.--Every day the bushes should be gone over, and these glued leaves pinched between the finger and thumb, so as to crush the Caterpillar; let no fastidious grower neglect this, or be induced to try other remedies; this is the only remedy that is simple and and effective.

RED SPIDER.

The Red Spider very seldom attacks plants in the open air, but confines itself to plants under glass.

REMEDY.--The Red Spider may be generally kept off by keeping the plants daily syringed with water.

ROSE BEETLE.

REMEDY.--Hand picking must be resorted to, for, like the Red Spider, it is proof against Hellebore, Whale Oil Soap, and all such applications.

INDEX.

	PAGE
Apples.....	5
" Summer Varieties.....	5
" Autumn Varieties.....	6
" Winter Varieties.....	9
" Hardy.....	14
Winter apples for South.....	14
Apricots	30
Asparagus	39
Blackberries	38
Cherries	22
" Sweet Varieties.....	22
" Sour Varieties.....	23
Climbing Vines.....	51
Crab Apples	15
Cultivation after Planting.....	59
Currants.....	35
Deciduous Trees, Upright.....	40
" " Weeping.....	45
" Shrubs	46
Dewberry.....	38
Directions for Transplanting.....	59
Diseases. Insects. Remedies.....	62
Distance for Planting.....	61
Estimate Tables.....	61
Evergreen Trees.....	54
" Shrubs.....	55

	PAGE
Gooseberries	37
Grapes.....	32
Hedge Plants.....	55
Insects. Diseases. Remedies.....	62
Mulching.....	59
Nectarines.....	31
Nut-Bearing Trees.....	39
Ornamental Department.....	40
Peaches.....	27
Pears.....	16
" Summer Varieties.....	17
" Autumn Varieties.....	18
" Winter Varieties.....	20
" Standard.....	17
" Dwarf.....	21
" Ironclad.....	20
Plums.....	24
Quinces.....	31
Quantities per Acre.....	61
Raspberries	36
Remedies. Diseases. Insects.....	62
Rhubarb.....	39
Roses.....	56
Shrubs.....	46
Transplanting Directions.....	59
Wintering Stock.....	60
Winter Apples for the South.....	14

INDEX

FIRST NATIONAL BANK,

NEWARK, NEW YORK.

I regard C. W. Stuart & Co. as one of our most honorable and reliable business firms. Their business is steadily increasing, and they take great pains that all transactions with their customers shall be satisfactory in every respect. Mr. Stuart has been extensively engaged in the Nursery business for the past twenty-five years, having several hundred acres under cultivation.

FLETCHER WILLIAMS, *Pres't First Nat'l Bank.*